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Environmental Consequences

Gray pine in the fog on the High Peaks Trail. NPS Photo.

Chapter 5:

Environmental Consequences

The National Environmental Policy Act (NEPA) requires that environmental assessments disclose the environmental impacts of a proposed federal action and feasible alternatives to that action. In addition, compliance with NEPA is also based on other federal laws, including effects on historic properties considered in accordance with the National Historic Preservation Act (NHPA). In this case, the proposed federal action is the adoption of a general management plan for Pinnacles National Monument.

The alternatives in this general management plan provide broad management direction. Thus, this environmental assessment is considered a programmatic document. As specific developments or actions are proposed subsequent to this General Management Plan for implementation, appropriate detailed environmental, including cultural, analysis would be prepared in accordance with NEPA and NHPA requirements. Actions that implement guidance provided in the GMP may therefore tier from this document as they undergo additional environmental impact analysis.

This chapter begins with a discussion on terms and definitions used to analyze environmental consequences, followed by a discussion on policy related to cumulative impacts. The second part of this chapter describes the methods and assumptions used for analyzing each impact topic or resource category. The impacts of the alternatives are then analyzed. Each impact analysis section includes a description of the impacts of the alternative actions, a discussion of cumulative effects, and a conclusion. Where data are limited, professional judgment has been used to identify environmental impacts. Professional judgment is based, in part, on observation, analysis of conditions, and responses described for similar areas.

The impacts of each alternative are briefly summarized in the “Summary of Impacts” chart at the end of the Alternatives chapter.

Terms and Definitions

The following section defines the terms used for determining the environmental consequences of the actions in the alternatives. The environmental consequences are defined based on impact type, intensity, and duration, and whether the impact would be direct or indirect. Cumulative effects are also identified.

Impact Type

The effects that actions would have on specific resources are considered either adverse or beneficial. Adverse impacts involve a change that moves the resource away from a desired condition or detracts from its appearance or condition. Beneficial effects would improve the condition or appearance of a resource or would be a change that moves the resource toward a desired condition. In some cases, the action could result in both adverse and beneficial effects for the same resource.

Intensity

Defining the intensity or magnitude of an impact is taken directly from Director’s Order 12: Conservation Planning, Environmental Impact Analysis and Decision-making (NPS 2001). Impact intensity is the magnitude or degree to which a resource would be adversely affected. Each adverse impact was identified as negligible, minor, moderate, or major. Because definitions of intensity vary by topic, separate intensity definitions are provided for each resource preceding the description of impacts. Due to the broad nature of actions called for in this GMP, most impact analysis is qualitative, rather than quantitative.

Duration

Duration refers to how long an impact would last. The following terms are used to describe the duration of the impacts:

Short term: The impact would be temporary in nature, generally lasting one to three years, such as disturbance associated with construction.

Long-term: The impact would last more than one year and could be permanent in nature, such as the loss of soil due to construction of a new facility. Although an impact may only occur for a short duration at one time, if it occurs regularly over a longer period of time the impact may be considered to be a long-term impact. For example, the noise from a vehicle driving on a road would be heard for a short time and intermittently, but because vehicles would be driving the same road for the foreseeable future life of the plan, the impact on natural soundscape would be considered to be long-term.

Except where otherwise specified, the impacts in this analysis are long-term in duration. Short-term impacts are always identified as such in the analysis.



California buckeyes turn shades of yellow and orange as they lose their leaves in late summer. NPS photo.

Direct versus Indirect Impacts

Direct effects would be caused by an action and would occur at the same time and place as the action. Indirect effects would be caused by the action and would be reasonably foreseeable but would occur later in time, at another place, or to another resource.

Except where otherwise specified, the impacts in this analysis are direct impacts on the resource being described. Some indirect impacts are also described and identified as such in the text.

Cumulative Impacts

Cumulative impacts result from the incremental impact of an action when added to other past, present, and reasonable foreseeable future actions, regardless

of what agency or person undertakes the action. Cumulative impacts can result from individually minor, but collectively important actions taking place over a period of time.

Cumulative impacts are considered for all impact topics and alternatives. The National Park Service assumes the types of use that are occurring now would continue, but that there may be new or different future uses. These actions are evaluated in conjunction with the impacts of each alternative to determine if they have any cumulative effects on a particular resource. For most of the impact topics, the geographic area defined for the analysis was the monument. For some impacts, such as for air quality or threatened and endangered species as well as for analysis of cumulative impacts, the geographic area is broader.

To determine potential cumulative impacts, projects in the area surrounding the monument were identified. Projects included in this analysis were identified by examining other existing plans and by calls to local governments and to state and federal land managers.

Methods and Assumptions for Analyzing Impacts

The planning team based the impact analysis and the conclusions in this chapter on the review of existing literature and studies, information provided by experts in the NPS and other agencies, and park staff insights and professional judgment. The team's method of analyzing impacts is further explained below. Impacts have been assessed assuming that mitigation measures would be implemented. If mitigation measures were not applied, the potential for resource impacts and the magnitude of those impacts would increase.

The impact analyses for the no-action alternative describe resource conditions as existing conditions, based on the continuation of current management. The impact analysis for the action alternatives (alternatives B, C, and D) compares the action alternative to the no action alternative. In other words, the impacts of the action alternatives describe the difference between no action and implementing the action alternatives. To understand a complete "picture" of the impacts of implementation any of the action alternatives, the reader must also take into consideration that impacts would occur under the no-action alternative.

Mitigation Measures for the Action Alternatives

Congress charged the NPS with managing the lands under its stewardship "...in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (NPS Organic Act, 16 USC 1). In addition, NPS Management Policies (2006) requires NPS managers to "seek ways to avoid or minimize adverse impacts on the resources and values to the greatest degree possible." As a result, NPS staff routinely evaluates and implements mitigation measures whenever conditions occur that could adversely affect the sustainability of national park system resources.

To ensure that implementation of the action alternatives protects unimpaired natural and cultural resources and the quality of the visitor experience, a consistent set of mitigation measures would be applied to actions proposed in this plan. The National Park Service would prepare appropriate additional environmental analysis (as required by the National

Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), and other relevant legislation) for proposed implementation of these future actions.

As part of the environmental review, the NPS would avoid, minimize, and mitigate adverse impacts when practicable.

The following mitigation measures and best management practices would be applied to avoid or minimize potential impacts from implementation of the action alternatives.

Mitigation Measures

Mitigation measures are the practicable and appropriate methods that would be used under all alternatives to avoid and/or minimize harm to monument natural and cultural, wilderness, and socioeconomic resources. These mitigation measures have been developed by using existing laws and regulations, best management practices, conservation measures, and other known techniques from past and present work in and around Pinnacles National Monument.

The GMP provides a management framework for the park. Within this broad context, the alternatives include the following measures that may be used to minimize potential impacts from the implementation of the alternatives. These measures would be applied to all alternatives, subject to funding and staffing levels. Additional mitigation would be identified as part of implementation planning and for individual projects to further minimize resource impacts.

Wilderness Values

MINIMUM REQUIREMENT / MINIMUM TOOL PROCESS

The Wilderness Act directs that agencies administer wilderness to preserve wilderness character. The purpose of the minimum requirement / minimum tool process is to reduce the effects of management on wilderness character and values. It provides a method for developing, evaluating, and selecting the actions that would be the least intrusive on wilderness character and values, while allowing the administration of the wilderness. The concept is applied to all management actions, programs, and activities within Pinnacles National Monument that might affect wilderness and potential wilderness (wilderness study areas).

The minimum requirement / minimum tool concept is applied as a two-step process. The first step (minimum requirement) is used to determine whether a proposed management action is appropriate and necessary for

the administration of the area as wilderness, and a determination that it would not cause unacceptable impacts on wilderness resources and character, in accordance with the Wilderness Act. The second step (minimum tool) is used to analyze the techniques and types of equipment needed to ensure that impacts on wilderness resources and character are minimized. If the project is found to be appropriate and necessary, then a management method (tool or technique) is selected that would result in the least amount of impact to the wilderness resources and character.

The minimum requirement / minimum tool process provides a formal method to develop alternative ways to take action in wilderness, and to evaluate each alternative with fewer effects on wilderness character and wilderness resources. The process assists NPS managers in determining an appropriate means to protect wilderness values.

Management and Protection of Natural Resources

AIR QUALITY

- Minimize NPS vehicle use and emissions and employ the best available control technology.
- Encourage the public and commercial tour bus companies to employ transportation methods that reduce emissions.
- Encourage employee carpooling and strive to accommodate employee work schedules to maximize carpooling ability.
- Implement a no idling policy for all government vehicles.
- Coordinate and consolidate trips to town and to westside facilities with park wide communication system to accomplish multiple tasks and carpooling, when possible.
- Implement sustainable practices in monument operations and building designs that reduce energy demands, thus reducing air pollution emissions.
- When feasible and if physically able, east side staff having duties on the west side should hike in lieu of driving. Park management will devise effective means of getting from Chaparral to the West Pinnacles visitor contact station until a connector trail is constructed.
- Strive for carbon neutral status in the monument by reducing greenhouse gas emissions while increasing appropriate carbon sequestration.

NATURAL SOUNDS

- Implement standard noise abatement measures during park operations, including: scheduling to minimize impacts in noise-sensitive areas, using the best available noise control techniques, using hydraulically or electrically powered impact tools when feasible, and locating stationary noise sources as far from sensitive uses as possible.
- Locate and design facilities to minimize above ambient noise.
- Avoid idling motors when power tools, equipment, and vehicles are not in use.
- Reduce use of mechanized leaf blowers and use hand tools (brooms) as a default.

DARK NIGHT SKIES (LIGHTSCAPES)

- Replace existing outdoor lighting in the monument with fixtures that do not contribute to nighttime light pollution.
- In frontcountry zones, install energy-efficient lights equipped with timers and/or motion detectors so that light would only be provided when it is needed to move safely between locations.
- In frontcountry zones, use low-impact lighting, such as diffused light bulbs, and techniques such as downlighting to prevent light spill and to preserve the natural lightscape.

HYDROLOGIC SYSTEMS, WATER QUALITY, AND WETLANDS

- Implement erosion control measures as appropriate, including minimizing unnatural discharge to water bodies, and regularly inspecting construction equipment for leaks of petroleum and other chemicals to prevent water pollution; and avoiding the use of heavy equipment in a waterway.
- Wash heavy equipment prior to use in or near water bodies.
- Use bio-lubricants (such as biodiesel and hydraulic fluid) in construction equipment.
- Develop and implement a spill plan and acquire supporting equipment.
- Integrate runoff management and mitigation systems into the designs of larger parking areas near water resources.
- Develop sediment control and prevention plans and implement best management practices, for projects that could impact water quality.
- Delineate wetlands and avoid all impacts (to the extent possible) to these sensitive environments.



- Conduct project activities near wetlands in a cautious manner to prevent damage from equipment, and related to erosion, siltation, etc. Apply protection measures during projects.
- Consult with NPS Water Resources Division regarding the wetlands Statement of Findings process for any potential wetland impacts.
- Avoid development in Regulatory Floodplains (generally the 100-year floodplain). Consult with NPS Water Resources Division regarding the floodplains Statement of Findings process for any action potentially in a floodplain.

SOILS

- Build new facilities on soils suitable for development.
- Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion control measures, such as erosion matting, silt fencing, and temporary sedimentation basins in construction areas to reduce erosion, surface scouring, and discharge to water bodies, while implementing the monument's noxious weed control program. Once work is completed, revegetate construction areas with appropriate native plants in a timely period according to revegetation plans.
- Limit equestrian uses to relatively level ground and only when soil conditions are dry.

VEGETATION

- Monitor areas used by visitors (e.g., trails, campsites) for signs of native vegetation

disturbance. Use public education, revegetation of disturbed areas with native plants, erosion control measures, and barriers to control potential impacts on plants from erosion or social trails.

- Develop revegetation plans for disturbed areas and require the use of genetically appropriate native species. Revegetation plans should specify species to be used, seed/plant source, seed/plant mixes, site-specific restoration conditions, soil preparation, erosion control, ongoing maintenance and monitoring requirements, etc. Salvaged vegetation should be used to the extent possible.
- Continue to implement a noxious weed control program. Standard measures could include the following elements: use only weed-free materials for road and trail construction, repair, and maintenance; ensure equipment arrives on site free of mud or seed-bearing material; certify all feed as weed-free for administrative pack stock; identify areas of noxious weeds pre-project and treat noxious weeds or noxious weed topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment); when depositing ditch spoils along the roads, limit the movement of material to as close as possible to the excavation site; scrupulously and regularly inspect areas that serve as introduction points for invasive plants (campgrounds, staging areas, maintenance areas, and corrals); revegetate with genetically appropriate native species; inspect rock and gravel sources to ensure these areas are free of noxious weed species; and monitor locations of ground-disturbing operations for at least three years following the completion of projects.

- Prior to allowing visitor equestrian use in the park, staff would develop Best Management Practices (BMP) to minimize the risk introduction of invasive plants and animals to the monument. BMPs could include only allowing weed-free certified hay into the monument and not allowing hay to be spread at trailheads.

WILDLIFE

- Employ techniques to reduce impacts on wildlife, including visitor education programs, restrictions on visitor and park activities when warranted, and law enforcement patrols.
- Implement a wildlife protection program. Standard measures would include project scheduling (season and/or time of day), project monitoring, erosion and sediment control, fencing or other means to protect sensitive resources adjacent to project areas, disposing of all food-related items or rubbish, salvaging topsoil, and re-vegetating.
- Implement measures to reduce adverse effects of nonnative plants and wildlife on native species.
- Protect and preserve critical habitat features, such as nest and granary trees, whenever possible.

SPECIAL STATUS SPECIES

Mitigation actions would occur during normal park operations as well as before, during, and after projects to minimize immediate and long-term impacts on rare, threatened, and endangered species. These actions would vary by project area, and additional mitigation measures may be added depending on the action and location. Many of the measures listed for vegetation, wildlife, and water resources would also benefit rare, threatened, and endangered species by helping to preserve or minimize impacts on habitat.

- Conduct surveys and monitoring for special status species as warranted.
- Locate and design facilities/actions/operations to avoid or minimize impacts on special status species habitat. If avoidance is infeasible, minimize and mitigate for adverse effects as appropriate and in consultation with technical experts.
- Minimize disturbance to special status species and migratory bird habitat through spatial and temporal planning.
- Develop and implement restoration and/or monitoring plans as warranted. Plans should include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques.

Cultural Resources

The protection of Pinnacles National Monument's cultural resources is essential for understanding the past, present, and future relationship of people with the monument environment and the expressions of our cultural heritage. The monument would pursue strategies to protect its cultural resources, including museum collections and archeological, historic, ethnographic, and archival resources, while encouraging visitors and employees to recognize and understand their value. The strategies would allow the integrity of the monument's cultural resources to be preserved unimpaired. They would also ensure that Pinnacles National Monument is recognized and valued as an outstanding example of resource stewardship, conservation education and research, and public use.

Some of the monument's cultural resources are within designated wilderness. The Wilderness Act specifies that the designation of any areas of the park system as wilderness "shall in no manner lower the standards evolved for the use and preservation of" such unit of the national park system under the various laws applicable to that unit (16 USC 1133(a) (3)). Thus, the laws pertaining to historic preservation also remain applicable within wilderness but must generally be administered to preserve the area's wilderness character. In accordance with NPS management policies, cultural resources that have been included in wilderness would be protected and maintained according to the pertinent laws and policies governing cultural resources, using management methods that are consistent with the preservation of wilderness character and values (6.3.8). These laws include the National Historic Preservation Act, the Archeological Resources Protection Act, the American Indian Religious Freedom Act, the Native American Graves Protection and Repatriation Act, and Executive Order 13007 that addresses government-to-government consultation.

Except for the North Chalone Peak Fire Lookout, as explained under *Cultural Landscapes and Historic Structures*, adverse impacts on properties listed in or determined eligible for listing in the National Register of Historic Places, would be avoided if possible. If adverse impacts could not be avoided, mitigation would be developed through a consultation process with all interested parties.

ARCHEOLOGICAL RESOURCES

Archeological surveys would precede ground-disturbance required for new construction or removal of eligible historic properties. Known archeological resources would be avoided to the greatest extent possible. If national register-eligible or-listed

archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer and associated tribes.

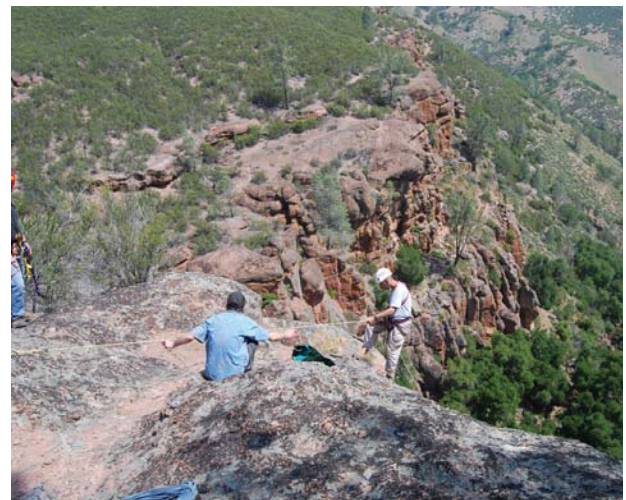
If unknown archeological resources are discovered during project work, work in the immediate vicinity of the discovery would be halted until the resources could be identified, evaluated, and documented and an appropriate mitigation strategy could be developed, if necessary, in consultation with the state historic preservation office and associated tribes.

HISTORIC STRUCTURES/BUILDINGS

All project work relating to historic structures/ buildings would be conducted in accordance with the guidelines and recommendations of the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. Typical mitigation measures for historic structures/ buildings include measures to avoid adverse impacts, such as rehabilitation and adaptive reuse, designing new development to be compatible with surrounding historic properties, and screening new development from surrounding historic resources to minimize impacts on cultural landscapes and values.

Adaptive reuse is the best strategy to ensure that buildings remain in good condition. When not being adaptively used, the best approach for preserving these structures is regular preservation maintenance, which ensures that roofs and walls as well as supporting structural elements are maintained in a sound, weather-resistant condition. An example of adaptive reuse is using historic structures to house park operations.

Historic structures would be maintained or stabilized until appropriate maintenance could be undertaken. Benign neglect would not be considered an appropriate management strategy. No national register-listed or -eligible structure would be removed or allowed to decay naturally without prior review by monument and region cultural resource specialists, including approval by the NPS regional director and consultation with the state historic preservation office. Before a national register-listed or -eligible structure is removed, appropriate documentation recording the structure would be prepared in accordance with Section 110(b) of the National Historic Preservation Act, and the documentation would be submitted to the



Photos (top to bottom): 1. Rappelling. 2. WNP Register, Park Information Desk, and Fee Collections. 3. Butterfield Barn. NPS photos.

Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) or Historic American Landscape Survey (HALS) program.

Historic structures that have been included within wilderness would be protected and maintained according to the pertinent laws and policies governing cultural resources using management methods that are consistent with the preservation of wilderness character and values. Laws pertaining to historic preservation remain applicable within wilderness but must generally be administered to preserve the area's wilderness character (16 USC 1133 (a) (3)). The responsible decision-maker would include appropriate consideration of the application of the provisions of the Wilderness Act in analyses and decision-making concerning cultural resources.

CULTURAL LANDSCAPES

All project work relating to cultural landscapes would be conducted in accordance with the guidelines and recommendations of the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. Typical mitigation measures for cultural landscapes include measures to avoid adverse impacts, such as designing new development to be compatible with surrounding historic properties and screening new development from surrounding cultural landscapes to minimize impacts on those landscapes. Adaptive reuse is the best strategy to ensure that landscapes remain in good condition.

VALUES, TRADITIONS, AND PRACTICES OF TRADITIONALLY ASSOCIATED PEOPLES

Also known as ethnographic resources, these resources and values would be protected through the identification of traditionally associated groups and documentation of their values, traditions, and practices. This would be done in collaboration with members and representatives of the groups themselves where possible. The culturally appropriate guardianship of these resources would include consultation with the public that use or may use them, incorporating their suggestions into management decisions to the fullest extent possible.

MUSEUM COLLECTIONS

Mitigation measures related to museum collections consist of conservation of a collection through proper storage, handling, and exhibit of objects as specified in the *NPS Museum Handbook* and NPS Director's Order No. 24, NPS Museum Collections Management.

Visitors boarding the park shuttle. NPS photo.



SCENIC RESOURCES

Mitigation measures are designed to minimize human-made visual intrusions. These include the following:

- Where appropriate, use facilities such as boardwalks and fences to route people away from sensitive natural and cultural resources while still permitting access to important viewpoints.
- Design, site, and construct facilities to minimize adverse effects on natural and cultural resources and visual intrusion.
- Provide vegetative screening, where appropriate.

SOCIOECONOMIC ENVIRONMENT

During the future planning and implementation of the approved management plan for Pinnacles National Monument, the National Park Service would pursue partnerships with tribes, local communities, and county governments to further identify potential impacts and mitigating measures that would best serve the interests and concerns of both the National Park Service and the local communities.

SUSTAINABLE DESIGN AND AESTHETICS

Sustainable practices would be used in the selection of building materials and sources and building location and siting. Design standards specific to the monument would be developed in all repair, rehabilitation, and construction projects.

Projects would use sustainable practices and resources whenever practicable by recycling, reusing, and minimizing materials, minimizing energy consumption during construction, and reducing energy needs throughout the lifespan of the project.

As required by Management Policies (NPS 2006), new buildings would be designed to meet a minimum silver LEED standard.

Visitor Experience

Access and Circulation

This section evaluates how each alternative would change access and circulation in the monument and the capacity of roads and facilities to accommodate that change. Beneficial impacts would be associated with a decrease in the level of visitor congestion or improvement in visitor access to new areas. Adverse impacts would be associated with the actions that reduce access to an area or increase the level of congestion.

The thresholds of change for the intensity of an impact are as follows:

Negligible: The effects would not be detectable and would have no discernible effect on the condition of roads and trails and/or traffic flow.

Minor: The effect would be slightly detectable, but there would not be an overall effect on the condition of roads and trails and/or traffic flow.

Moderate: Impacts would be clearly detectable, and the action could have an appreciable effect on the condition of roads and trails and/or traffic flow.

Major: Impacts would be substantial, with a highly noticeable influence, and the condition of roads and trails and/or traffic flow could be permanently altered.

ACCESS AND CIRCULATION – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Few actions in alternative A would affect access and circulation in the monument. Most visitors would continue to access the monument via SR 146 which dead ends on the east and west sides. Once visitors are within the monument, they would continue to access developed areas, depending on the time of year, by either personal vehicle or via the internal shuttle system, during peak use periods. Shuttle access would continue to result in short delays to reach points of interest, such as Bear Gulch, caves or High Peaks area.

Existing parking areas and trailheads would continue to be available and these would continue to experience overcrowding during peak use. In times of peak use, on the east side, visitors often have to drive around looking for a parking spot, are unable to park near the main attractions, have to wait for a shuttle to get to the main attractions, or are unable to get in to the monument. Sometimes this results in visitors parking outside the entrance and walking into the monument, an unsafe condition due to the narrow entrance road and minimal shoulder area. Combined, these would continue to be

seasonal long-term minor to moderate adverse effects, although existing roads and parking areas would continue to provide tremendous beneficial effects to most visitors attempting to access the monument on most days.

Ongoing maintenance and improvement of monument roads, sidewalks, and parking areas would continue to have a long-term beneficial effect on visitor access and circulation by accommodating vehicular and pedestrian access throughout the developed portion of the monument.

Public use of the noncontiguous Bear Valley School property, proposed under all alternatives, would create some traffic congestion and safety issues. The building is located on a curve in a narrow section of Highway 25. Minor to moderate, long-term adverse impacts would likely occur due to congestion and safety issues associated with vehicles turning into and exiting the property.

The use of monument trails is concentrated in the High Peaks area. Because this is also where the shorter-distance trails are located, these trails would continue to be crowded on peak days, a seasonal minor long-term adverse effect on visitor access and circulation. A South Wilderness Trail connection would not have more than a negligible impact on access, given its remoteness.

ACCESS AND CIRCULATION – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Access and circulation impacts described under alternative A would largely continue. Alternative B would not change vehicle entry on either side of the monument. While most existing parking areas would remain the same in this alternative, there would be some modifications. Parking would be reduced at the Moses Spring parking area to reduce impacts on riparian resources. Because this could include the loss of about fifteen parking spaces at one of the most popular trailheads in the monument, congestion in Bear Gulch could increase slightly on busy weekends as visitors locate parking. Adverse impacts, however, would be minor because the relocated entrance station would provide the monument with the opportunity to better prepare visitors for current parking conditions and shuttle options. Visitors would also need to walk a short distance further to access this trailhead, resulting in a minor adverse impact to access and circulation. Similarly, on the west side, removal of the Chaparral parking lot out of the floodplain would also require visitors to walk a short distance from the overflow parking area to access the picnic area and trailheads. Conversely, removal of the Chaparral lot would also have beneficial effects on planning for long-term circulation and access by proactively relocating

parking to a more sustainable location out of the floodplain. Overall, parking changes under alternative B would have a minor adverse effect on visitor access and circulation. Both of these actions would have minor short-term effects due to operational activities associated with removal of material, including the use of large trucks on the road to transport materials. Because each project would occur at its road terminus, neither would require road closures or re-routes.

A larger visitor center in the campground, replacing the current East Pinnacles visitor center at the end of its useful life, could reduce congestion in the Bear Gulch area by providing an improved option for visitors to obtain information in an area where more parking is available, although it could also increase congestion in the vicinity of the replacement visitor center and campground, if more day use visitors remain longer at the visitor center or park longer to use the new trailheads nearby.

In contrast to alternative A, where the entrance station is located after the campground and visitor contact station, the new location of the entrance station would have a beneficial impact on circulation by providing drivers with information as they enter the monument that could guide them to less congested areas and opportunities before they arrive at these other areas. Because there would likely continue to be more visitors during some peak periods than could be accommodated at the monument, however, some amount of congestion near the replacement entrance station would continue. The redesign of the visitor center, entrance station, day use area, and campground entry would also have a beneficial effect on circulation by better separating day users from overnight users and reducing confusion through dissemination of parking and shuttle information before entry to the developed area. The short-term effects of construction would be adverse and moderate as traffic and parking are temporarily and periodically rerouted and rearranged.

In addition, alternative B would provide more trail use opportunities to disperse visitors and to provide access to newly acquired lands and previously inaccessible areas. Some of these would also be provided in wilderness, creating loops, connections, and dispersing visitors, protecting wilderness experiences during times of peak use. These new opportunities, along with expansion of the trail system within the monument to include new interpretive trails and more accessible trails to existing monument sites would result in long-term, beneficial impacts on trail access within the monument. Short-term effects would be negligible, as construction of new trails would not affect pedestrian traffic on the current trail network.

Group size limits, if instituted in the High Peaks area, could reduce crowding on climbing route trails in the High Peaks, a long-term adverse effect on visitor access and circulation if groups are turned away. Monitoring and management actions described in the User Capacity section of this GMP would mitigate this impact by allowing the monument to implement indirect management techniques early to achieve desired conditions without limiting visitor access.

Improved maintenance of trails would occur from additional trail crew staffing and could have beneficial effects by reducing impacts from crowding on trails and improving trail junction signage to ensure that visitors access their intended destinations.

ACCESS AND CIRCULATION – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Impacts under alternative C would be the same as those described under alternative B, with the following exceptions.

First, as in alternative A, the Moses Spring parking area would be retained, benefitting visitors to this popular trailhead. In addition, the zoning scheme is less restrictive than alternative B and would allow greater access for groups to more areas within the monument. Also, with the addition of parking sufficient to serve the capacity of a larger East Pinnacles visitor center, alternative C provides the most parking of the alternatives.

Although there would be no provision for bicycle use on trails, bicycles could continue to use paved and unpaved roads and the provision of bicycle racks at trailheads could promote the use of this alternative means of transportation and provide a small beneficial impact on visitor access and circulation.

Enhancement of shuttle stops through shade structures, drinking water, and visitor information would encourage more people to ride shuttles which, in turn, would reduce congestion, improving visitor access and circulation.

ACCESS AND CIRCULATION – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts under alternative D would be the same as alternative C, except that alternative D proposes regional visitor / interpretive center staffing and greater enhancement of shuttle stops. In addition, alternative D proposes a site plan of the Moses Spring parking area to improve natural hydrologic conditions. If this site plan were to be implemented, the potential impacts of this action would be the same as described in alternative B.



Photos (top to bottom) 1. Ribbon cutting at the dedication of the new westside visitor center, April 2012. 2. Bear Gulch Nature Center. 3. Camping. NPS photos.

Providing staffing to assist with operation of regional visitor / interpretive centers could have a beneficial effect from providing information to visitors before they reach the monument, perhaps by directing visitors to other less used areas and decreasing impacts on access and circulation in currently congested areas.

ACCESS AND CIRCULATION – CUMULATIVE IMPACTS

Past projects, including the continuing development of the trail system and the provision of a shuttle system, have expanded access to the monument and improved circulation over time, resulting in beneficial impacts.

The narrowness and tight turns of Route 146 limit the size of vehicles that can enter the west side, making it difficult for school buses, in particular, to negotiate this entry. The condition of this route would continue to result in a moderate, adverse impact on monument access from the west. The effects of the proposed alternatives would not add to this adverse impact and would, overall, improve access and circulation on the eastern side of the monument, resulting in moderate, adverse cumulative impacts on the west side and beneficial impacts on the east side.

ACCESS AND CIRCULATION – CONCLUSION

The effects of proposed actions under alternative A would have overall long-term benefits on access and circulation within the monument, with some minor to moderate adverse impacts.

The effects of proposed actions under alternatives B, C, and D would have long-term benefits on access and circulation within the monument, primarily due to expansion of the trail system, increased trail crew staffing, and improved delivery of traffic and parking information to visitors. Alternative C provides the greatest benefits in terms of additional parking and trails.

Parking changes at Moses Spring (alternative B) and Chaparral (alternatives B, C, and D) would produce minor adverse impacts.

Visitor Use Opportunities

This impact analysis evaluates how visitor use opportunities might vary among alternatives as a result of implementing proposed actions and applying different management zones in the alternatives. The analysis is qualitative rather than quantitative because of the conceptual nature of a GMP. Professional judgment was used to reach reasonable conclusions regarding the intensity, duration, and type of potential impact. Impacts could be temporary or short-term (for

example, delays and inconvenience caused by the construction of facilities) or long-term (ongoing and lasting effects over time).

The following areas have been analyzed in this section:

Recreational Opportunities: this section analyzes the availability and variety of recreational opportunities for visitors in each alternative, such as hiking, camping, and picnicking.

Visitor Facilities: this section analyzes the different facilities available to visitors in each alternative, including visitor centers, campgrounds, trails, and other day use facilities, as well as commercial services, when applicable.

The thresholds of change for the intensity of an impact are as follows:

Negligible: Impacts would be barely detectable to visitors and would have no discernible effect on visitor experience related to recreational opportunities, visitor facilities and/or commercial services.

Minor: Impacts would be slightly detectable to visitors, but would not have an overall effect on visitor experience related to recreational opportunities, visitor facilities and/or commercial services.

Moderate: Impacts would be clearly detectable to visitors and could have an appreciable effect on visitor experience related to recreational opportunities, visitor facilities and/or commercial services.

Major: Impacts would be substantial, and have highly noticeable influences on visitor experience and could permanently alter access to and availability of various aspects of the visitor experience related to recreational opportunities, visitor facilities and/or commercial services.

VISITOR USE OPPORTUNITIES – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Recreational Opportunities

Hiking, climbing, sightseeing (by car and on foot), and camping in the developed campground are common activities and would continue to be available in alternative A, a long-term beneficial effect. Activities such as equestrian use and backcountry camping are currently not accommodated by park facilities or programs.

As the demographics of the region and monument visitors change, the outdoor recreational needs of an increasingly diverse local community have shown a growing desire for areas suitable for large group

picnicking. Although there are a few group picnic sites, the demand for these sites would continue to be greater than the supply. In addition, some visitors desire experiences not available at Pinnacles, such as backcountry camping and equestrian opportunities. Therefore, under the No Action alternative, some recreational opportunities, such as equestrian and bicycle use, backcountry camping and large group picnicking, would continue to be underutilized by, or unavailable to, visitors -- a long-term minor to moderate adverse impact.

Because the visitor center is located adjacent to the campground, day use visitors sometimes park in the campground and campers sometimes occupy day use areas. During peak use conditions, this can cause conflicts, a long-term minor adverse effect.

Although prepared food and/or drinks and wireless internet in the campground would continue to be unavailable, the Western National Parks Association and the campground concessioner would continue to supply a limited variety of health, safety and educational sales items, as well as other sales items such as pre-packed snacks, souvenirs, and cold drinks at the East Pinnacles visitor center, a long-term beneficial effect.

Visitor Facilities

In alternative A, there would be no changes in visitor use facilities. A variety of activities would continue to be accommodated, including a small visitor center and nature center on the east side, a visitor contact station on the west side, overnight camping on the east side, and picnicking, trails and interpretive features on both sides. There would continue to be long-term beneficial effects from these facilities, although the visitor center on the east side would continue to be cramped, providing very limited opportunities for interpretation and education.

The use of monument trails is not evenly distributed. Because the trail system would remain the same, except for the South Wilderness Trail connection, some popular trails, such as the High Peaks, talus cave, and climbing access trails, would continue to have greater use than the rest of the monument's trail system. This would continue to concentrate visitors in a few areas. Some visitors may not use one-way trails if they are reluctant to take hikes that involve retracing their steps. Other longer trails have no specific destinations mapped or designated, and visitors may not use these unless monument staff specifically directs them to sites or activities in these areas.

Because of insufficient space, the East Pinnacles visitor center provides minimal interpretive and educational services. The visitor center lacks space for indoor interpretive and educational programming and cannot

adequately serve large groups. This lack of space is noticeable to visitors and has an appreciable effect on the ability of the monument to provide services, a moderate adverse effect.

Although camping was a part of the visitor experience on the west side (destroyed by flooding in the 1990s), this activity is no longer offered, limiting overnight visitor use, particularly for climbers who have indicated an interest in longer visits. The small number of group picnic sites and the lack of camping on the west side would continue to have long-term, minor to moderate, adverse impacts on the visitor experience, as many visitors to the west side come in large family groups and many other visitors have expressed a desire to remain overnight as they once were able to do.

Shuttle stops on the east side would continue to be unimproved, generally with only a sign to indicate where visitors should wait. As a result, visitors would continue to wait in all types of weather without shelter, a long-term minor adverse effect.

Although accessibility guidelines have been implemented in some areas, including access into some campsites, the visitor center, restrooms, and some monument waysides, there is currently no accessible trail route from which to view the High Peaks area on the west side. Although the High Peaks can be viewed from several accessible locations on the west side, the lack of a trail experience to do the same would continue to have an appreciable long-term moderate adverse impact on some visitors.

VISITOR USE OPPORTUNITIES – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Recreational Opportunities

Recreational opportunities would continue to be the same as in alternative A. As in alternative A, there would be no new facilities for large groups, however some accommodations for smaller groups would be provided.

In addition, there would be expanded opportunities for hiking from the construction of new trails. Some of these trails would provide access to previously remote areas and some would allow for short excursions to newly available features. These new trails could include a medium-length loop trail accessing the bottomlands and its historic ranch sites and a connection to the North Wilderness Trail from the campground. Trails on the Bottomlands and in McCabe Canyon could disperse visitors from heavily used areas and the wilderness connection would provide new opportunities to experience wilderness, resulting in beneficial impacts on recreational opportunities.

New zoning in alternative B would result in a narrower focus on permissible or encouraged visitor activities in localized areas, because more areas would be zoned as “primitive”, including some non-wilderness areas. Because there could also eventually be group size limits instituted to protect solitude in primitive zones, the availability of visitor use opportunities in these zones could be limited. On the other hand, those seeking a wilderness-type experience would benefit from improved solitude and other wilderness qualities due to fewer visitors. Overall, minor to moderate adverse impacts could occur for some visitors, along with beneficial effects on the visitor experiences of others.

The availability of concession items and services would remain the same as those described under alternative A, with a similar long-term negligible adverse impact on visitor experience for some visitors.

Removal of the Moses Spring parking lot could benefit some visitor experiences by enhancing solitude and quiet in this area and by providing the opportunity to see a restored riparian area. Removal and transportation of material from the site would have moderate short-term adverse impacts due to the noise and visual impacts associated with heavy machinery and trucks.

Visitor Facilities

Most facilities would remain the same as in alternative A. In addition to new trails, however, new facilities would include a small visitor center in the vicinity of the campground, a new entrance station to the east side, and a small picnic area at the campground. The visitor center would provide some additional exhibit space and the ability to handle groups more efficiently, and additional small group picnicking sites would provide a long-term benefit for some visitors. Short-term adverse impacts to visitor use opportunities would be moderate, as day users would be temporarily displaced during construction. The monument would still be able to display some exhibits and provide indoor visitor information during construction by using the Bear Gulch Nature Center.

Some visitors would experience a minor to moderate adverse impact due to removal of the swimming pool, especially campers who visit during the summer and who have been using the pool as an important part of their experience, even before the monument’s acquisition of the campground and pool.

VISITOR USE OPPORTUNITIES – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Recreational Opportunities

In addition to existing recreational opportunities, there would be new opportunities for hiking, picnicking, camping, equestrian use and bicycling in alternative C.

As in alternative B, trail improvements would include new trails, with some providing access to previously remote areas and some allowing for short excursions to newly available features. Unlike alternative B, a trail in the bottomlands would accommodate new users including equestrians and bicyclists. Although there would be new equestrian use, the trail would be short and would not be connected to other nearby equestrian trails in the region. Similarly, bicycling opportunities would also be limited by the trail's length because it would be provided primarily as an additional recreational opportunity for campground visitors.

While the addition of an equestrian and bicycle trail would improve recreational opportunities for some, a long-term beneficial effect, it would also have potential adverse effects on other visitors from the potential to encounter animal waste on the trail and from the potential for trail user conflicts.

A relatively easy loop trail into McCabe Canyon from the campground would provide a new hiking opportunity outside of the popular High Peaks area. These new trails would disperse visitors and provide new opportunities to experience wilderness, resulting in beneficial impacts on visitor use opportunities.

Backcountry camping would provide a new overnight wilderness experience. West side camping would also allow climbers and other visitors to extend their visits and their time on the trail or rock. Combined, these new opportunities would enhance the diversity and availability of overnight experiences, but may also increase the number of visitors on trails at one time due to extended visits or on previously rarely visited backcountry trails, leading to minor adverse impacts.

Because alternative C has the least amount of primitive zoning, it would also have the most potential for infrastructure and interpretive development at trailheads and other visitor use areas. More information could be perceived as a beneficial impact or could degrade anticipated experiences related to expectations of low levels of development. As a result, there could be both long-term minor adverse and beneficial effects, depending on visitor expectations. In alternative C, both large and small groups would find more opportunities from changes in zoning that would accommodate

larger groups on popular trails and provide facilities designed for group use.

In addition to the concession sales items that would continue to be offered in alternatives A and B, the monument would consider authorizing bicycle rentals, climbing gear sales and rental, and wireless internet services. There would be a beneficial effect on some visitors from providing these opportunities. Other visitors could find new amenities such as wireless access unnecessary or intrusive, a long-term minor adverse effect.

Visitor Facilities

In addition to new trails, other new facilities would include a larger replacement visitor center in the vicinity of the campground, a new entrance station to the east side, an improved picnic area designed for groups near the campground, and new equestrian facilities. The entrance to the visitor services and campground area would be redesigned to better separate day and overnight uses and improve the arrival experience. The replacement visitor center would provide additional exhibit space, as well as opportunities for indoor and outdoor group use, providing long-term benefits to visitor experiences. Some short-term, minor to moderate adverse impacts would occur to visitor experiences due to the noise, confusion, and visual impacts associated with construction and the reconfiguration of a primary visitor services area.

VISITOR USE OPPORTUNITIES – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Recreational Opportunities

Recreational opportunities under this alternative would increase in quantity and availability compared to alternative A. Impacts would be the same as those described for alternative C, with the exception of impacts related to equestrian use and facilities, which are not proposed in this alternative.

Visitor Facilities

Impacts from the construction of a replacement visitor center, reconfigured campground, new day use picnic area and other facilities would be the same as in alternative C, except that the proposed visitor center would be slightly smaller. While this would increase the space of the existing visitor center, compared to alternative C, this smaller visitor center could potentially provide fewer opportunities for group uses. Establishing backcountry campsites, a west side walk-in campground and other changes in visitor facilities would also have the same short-term minor to moderate adverse impacts on visitor experience from noise and

disturbance and potential changes in short-term access identified in alternative C as well as long-term beneficial effects from providing these new uses.

VISITOR USE OPPORTUNITIES – CUMULATIVE IMPACTS

Ample recreational opportunities would continue to be available regionally that complement opportunities available at the monument. Additional recreational opportunities available in the region include equestrian and stock use, hunting, backcountry camping, and off-road vehicle use at several county, regional, state, and federal sites. Climbing opportunities are less common in the region, making it important to continue current opportunities at the monument.

Many commercial services and facilities, including lodging, food services, and additional recreational, cultural, and educational opportunities would continue to be provided in the broader region, although opportunities close or adjacent to the monument are few.

Outside of the monument, rapid regional population growth has contributed to an increasing number of visitors competing for limited parking areas and trail use opportunities. This minor adverse effect is likely to continue in the lifespan of this GMP. Past and ongoing projects, including a shuttle system to transport visitors within the monument and new land acquisition has expanded visitor use opportunities. The beneficial effects provided by the additional lands include the ability to provide for overnight camping within the monument and to open new areas for public access and enjoyment.

Taken as a whole, the reasonably foreseeable past, present, and future cumulative actions would continue to provide diverse and expansive visitor experiences, recreational opportunities, and visitor services and facilities in the region, resulting in long-term benefits to visitors and a minor adverse effect due to population growth.

Combined with the effects of alternative A, there would continue to be both minor to moderate cumulative adverse and beneficial impacts. Alternative B would contribute more long-term beneficial effects from a small number of new visitor use opportunities and facilities and minor adverse impacts from potential regulation of visitor use. Alternatives C and D would contribute more long-term beneficial effects from a wider range of visitor use opportunities and facilities, with fewer impacts from additional regulation of visitors. Based on this, alternatives B, C and D would continue to have long-term minor cumulative adverse effects and long-term cumulative beneficial effects in the region.

VISITOR USE OPPORTUNITIES – CONCLUSION

Overall, alternative A would have a long-term, minor to moderate, adverse impact on the visitor experience, primarily from deficiencies in visitor facilities based on changing visitor needs, and from limited staffing.

Alternative B provides high quality wilderness-centered experiences, benefitting users who seek experiences typically associated with designated wilderness. Adverse impacts on visitor experience and use would be minor, while many benefits would be realized for wilderness users.

Alternatives C and D provide a high diversity of recreational experiences and amenities, benefitting many visitors. Adverse impacts on visitor experience and use would be minor to moderate, while many benefits would be realized for a variety of visitor types.

Interpretation and Education

This section analyzes two aspects of the visitor experience: education and interpretation, including the elements of visitor information, orientation, and inspiration. These two visitor experience components evaluate opportunities for and the quality of visitor information and orientation, as well as interpretive and educational experiences. Impact analysis was based on whether there would be a change in the access to high quality, diverse media and programs throughout the monument in order to achieve the desired conditions called for by the alternatives.

This assessment focused on the intensity and duration of adverse impacts that would result from the proposed actions in the plan relative to the aspects of the visitor experience related to interpretation and education, as well as the beneficial effects of the proposed actions.

The thresholds of change for the intensity of an adverse impact are as follows:

Negligible: Adverse impacts would be barely detectable to the visitor and would be expected to have no discernible effect on opportunities for interpretation or education.

Minor: Adverse impacts would be slightly detectable to the visitor, but would not affect opportunities for interpretation or education.

Moderate: Adverse impacts would be clearly detectable to the visitor and could have an appreciable effect on opportunities for interpretation or education.

Major: Adverse impacts would have a substantial, highly noticeable influence on visitor experience and could permanently alter access to and availability opportunities for interpretation or education.

INTERPRETATION AND EDUCATION – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Quality interpretive programs would continue to be offered, and all interpretive and environmental education opportunities for visitors would continue to be comprehensively planned, a long-term beneficial impact. Since no new employees would be added, however, monument interpretive staff would not be able to meet visitor demand during the spring and fall seasons and during summer holidays, nor would the monument be able to expand its variety of topics. Limited Junior Ranger programming would be offered via activities that children complete on their own. Ranger-guided activities such as plant walks, night hikes, and bird watching would be offered sporadically.

A limited number of non-personal interpretive services would continue to be available to visitors and potential visitors, such as museum exhibits, brochures, an in-depth monument website, and bulletin board/wayside displays throughout the monument. Without additional staffing, the replacement of waysides over time would be intermittent, having an adverse effect on the ability of the monument to use this medium for interpretive messages.

Under this alternative, staff would continue to be limited in their availability to present educational programs both on-site and in the classroom. Teacher involvement in monument programs is well below expectations set by NPS policy. Staffing levels are insufficient to allow the monument to fill many of its frequent requests for outreach education programs.

The monument's interpretive staff, with contributions from members of all divisions, participates in a fair number of in-park and community outreach activities, but there is room for improvement since demand for outreach is not currently being met.

Staffing constraints would continue to limit the number of interpretive and educational programs provided over time, having a long-term, and minor to moderate, adverse impact on interpretive and educational opportunities, given ongoing and unmet demand for these services.

INTERPRETATION AND EDUCATION – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

All of the beneficial effects described under alternative A would continue under this alternative. Alternative B would emphasize interpretation and education related to wilderness values, but would also increase the level of interpretive programming focused on cultural resources. Because self-reliance and indirect management (de-emphasizing direct staff-visitor engagement) are key components of alternative B, most formal interpretation and education would be conducted away from the core of the monument and outside of the monument when possible. This would allow visitors within the monument to enjoy high-quality wilderness experiences, while the monument focuses its interpretive staff more on community engagement, outreach, and local educational needs.

Interpretive efforts in the monument would focus on exterior exhibits at visitor centers, as well as other non-personal information and interpretive services. A replacement visitor center on the east side would provide additional exhibit space. Several staff positions would be added to the division, allowing the monument to seek to maintain current levels of visitor understanding while enhancing its outreach and education programs. While it would be difficult, given the lack of personal interpretive services, to increase visitor understanding above current levels in the monument itself, substantial strides would be made in creating effective outreach and educational programs off-site, resulting in more engaged and informed classrooms and local participants. Alternative B would result in limited, but overall beneficial impacts on the provision of interpretation and education.

INTERPRETATION AND EDUCATION – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

All of the beneficial effects described under alternative A would continue under this alternative. New staff positions, including an educator, interpreter, and park guides, would increase the monument's capacity to fulfill educational requests and in-monument programming needs. A replacement visitor center on the east side, with ample space for exhibits and indoor programming, would facilitate a higher level of programming. The emphasis on serving multiple audiences through a wide variety of media and increased programming would allow the interpretive staff to reach more visitors. Because these actions would provide expanded interpretation and education, both within and outside the monument, they would have a long-term beneficial impact on the monument's capacity for interpretation and education.

INTERPRETATION AND EDUCATION – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

All of the beneficial effects described under alternative A would continue under this alternative. New staff positions, including an educator, interpreters, a media specialist, and park guides, would increase the monument's capacity to fulfill educational requests and in-monument programming needs, having a greater beneficial effect than the other alternatives. As in alternative C, a replacement visitor center on the east side would facilitate a higher level of programming, although not to the same extent because there would be less space allotted for group use and exhibits. The emphasis on serving visitors through a range of "outdoor classroom" opportunities, as well as an emphasis on involving people in science and stewardship activities, would allow interpreters to make more meaningful connections between visitors and the resources. Similar to alternative C, these actions would have a long-term beneficial impact by expanding capacity for interpretation and education both within and outside the monument.

Participation in regional visitor / interpretive centers will also have beneficial impacts, providing more opportunities for outreach and distribution of materials.

INTERPRETATION AND EDUCATION – CUMULATIVE IMPACTS

Regional population growth is expected to increase visitation at a rapid pace; and changing demographics would likely bring an ever greater diversity of visitors to the monument. Therefore, it is reasonably foreseeable that the demand for interpretive and educational services, such as in-classroom programs, may continue to exceed the monument's capacity to provide them. Interpretive programming available to off-season visitors would continue to be limited and the monument may have difficulty keeping pace with changing technologies that would allow visitors to receive information and interpretation in new ways.

Outside of the monument there are limited opportunities to obtain interpretive materials through a variety of local, state, and federal resources in the region, a minor to moderate adverse effect. Visitor surveys indicate that the public desires more information about the monument and the greater region.

Monument staff would continue to work with regional partners such as the Bureau of Land Management and the U.S. Forest Service in coordinating interpretive training and outreach events as staffing and funding allows, a beneficial long-term effect. There is currently little coordination of educational or recreational

planning, however, with other nearby units (Clear Creek Recreation Area and Los Padres National Forest).

The above impacts, in combination with the adverse and beneficial impacts of alternative A as described in the analysis section, would continue to result in minor to moderate, adverse cumulative impacts on educational and interpretive opportunities. Alternatives B, C, and D would each reduce this cumulative adverse impact, primarily through additional staffing and programming. These benefits, however, would be greater under alternatives C and D because of their emphasis on both internal and external interpretation and education.

INTERPRETATION AND EDUCATION – CONCLUSION

Educational and interpretive programs under alternative A would provide beneficial effects to the monument visitors, school groups and teachers, local communities, and organizations. In the long-term, however, staffing and programmatic constraints would result in fewer interpretive and educational opportunities resulting in minor to moderate, adverse cumulative impacts on education and interpretation.

Educational and interpretive programs under alternative B would provide beneficial effects to monument visitors, school groups and teachers, local communities, and organizations.

Educational and interpretive programs under alternatives C and D would provide greater beneficial effects than in alternative B, to monument visitors, school groups and teachers, local communities, and organizations.



Camp Pinnacles participants play corner-to-corner. NPS photo.

Wilderness

Working from definitions included in the Wilderness Act, Management Policies (NPS 2006), interagency wilderness monitoring strategies, and the tradition of wilderness preservation and management at the monument, the following wilderness qualities have been identified for consideration in this analysis:

Untrammeled: The Wilderness Act states that wilderness is “an area where the earth and its community of life are untrammeled by man.” Essentially, wilderness is unhindered and free from modern human control or manipulation. This quality is degraded by modern human activities or actions that control or manipulate the components or processes of ecological systems inside the wilderness.

Undeveloped: The Wilderness Act states that wilderness is an area of undeveloped land retaining its primeval character and influence, without permanent improvements or human habitation.” This quality is degraded by the presence of structures, installations, habitations, and by the use of motor vehicles, motorized equipment, or mechanical transport that increases people’s ability to occupy or modify the environment.



West side stream. Photo by Paul Johnson.

Natural: The Wilderness Act states that wilderness “is protected and managed so as to preserve its natural conditions.” Wilderness ecological systems are substantially free from the effects of modern civilization. This quality is degraded by intended or unintended effects of modern people on the ecological systems inside the wilderness since the area was designated.

Solitude or a primitive and unconfined type of recreation: The Wilderness Act states that wilderness has “outstanding opportunities for solitude and/or a primitive and unconfined type of recreation.” This quality is about the opportunity for people to experience wilderness. This quality is degraded by settings that reduce these opportunities, such as visitor encounters, signs of modern civilization, recreation facilities, and management restrictions on visitor behavior.

Impacts on natural and cultural resources, visitor access, soundscape, night sky, and other resources are evaluated elsewhere in the environmental consequences section. The analysis for this topic focuses on wilderness character and wilderness experience, which are integrally related because much of wilderness character can only be subjectively determined by the visitor’s experience (for example, solitude or freedom of movement).

The thresholds of change for the intensity of an impact are as follows:

Negligible: Impacts would not be detectable to most visitors and would have no discernible effect on wilderness qualities.

Minor: Impacts would be slightly detectable to some visitors but would not be expected to have an overall effect on wilderness qualities.

Moderate: Impacts would be clearly detectable by many visitors and could have an appreciable effect on wilderness qualities.

Major: Impacts would have a substantial and noticeable effect for most visitors on wilderness qualities and could permanently alter various aspects of the visitor experience.

WILDERNESS CHARACTER – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Under alternative A, the monument’s designated wilderness would continue to be managed as it is now. The minimum requirement analysis would continue to be used to determine if, when, and how actions that might impact wilderness character could be implemented.

Untrammeled

Much of the Pinnacles Wilderness is essentially unhindered and free from modern human influence or manipulation. A few ongoing actions within designated wilderness manipulate or constrain the biophysical environment, especially the existence and maintenance of Bear Gulch Reservoir and the pig exclusion fence, have components located in wilderness. Although these installations are used for resource management purposes, including retention of the reservoir to support California red-legged frogs and use of the fence to exclude non-native feral pigs from core areas of the monument, both actions constitute human manipulation or control of wilderness. The pig fence is a direct manipulation of the biophysical environment, influencing some wildlife movement along its length. The reservoir manipulates the natural stream flow, particularly through Bear Creek Cave. Both are clearly detectable by visitors. Maintenance of both installations would continue to have a long-term moderate adverse effect on the untrammeled quality of wilderness. Invasive exotic plant control along wilderness trails and monitoring California condors and prairie falcons would continue. Because the exotic plant control is accomplished without power tools this action would not rise above minor in intensity. Altogether, alternative A would continue to have a minor to moderate adverse impact on this wilderness quality.

Undeveloped

Non-recreational infrastructure and facilities within wilderness include old roads and road traces, the pig exclusion fence, the Bear Gulch Reservoir, and data loggers in caves. Some of these installations, like the data loggers and many old road traces are only slightly detectable to visitors. Some, like the pig exclusion fence and the reservoir are more obvious. Because these installations are human-built intrusions on the primeval character of the landscape, they have a minor to moderate adverse effect on this wilderness quality.

Natural

Natural resource impacts due to current management would only be slightly detectable to most visitors. Long-term adverse impacts on the natural quality of wilderness character from the implementation of this alternative would range from minor to moderate. The Bear Gulch Reservoir is an alteration of natural hydrologic flow within wilderness. Extirpated species, such as the foothill yellow-legged frog, have also altered natural regimes. The continued effort to re-establish formerly extirpated species such as the California condor, the California red-legged frog, and the peregrine falcon provide ongoing benefits. The maintenance of natural fire regimes through the use of

prescribed fire is consistent with the restoration and preservation of naturalness, and would have long-term beneficial impacts on this wilderness quality. However, the monument would not conduct prescribed fires within designated wilderness until it has an approved Wilderness Stewardship Plan. The pig fence provides a beneficial effect to this quality by limiting the damage otherwise caused by non-native pigs.

Solitude or a primitive and unconfined type of recreation

Opportunities for visitors to experience wilderness would continue to be abundant. Such opportunities are limited, however, in certain areas. In the High Peaks, some wilderness trails experience high levels of seasonal use. The regional population is expected to increase substantially in the next 20 years, potentially increasing visitation to the monument. Because many of the monument's popular hiking destinations are found in wilderness, increased visitation without dispersal could further decrease opportunities for solitude.

Existing recreational development in wilderness, including 32 miles of trails and various visitor aids such as handrails, signs, and steps, is primarily concentrated in the heavily used High Peaks area. These existing facilities have a moderate adverse effect on this wilderness quality as they are designed to facilitate increased visitation.

A remote, approximately two mile connection between the South Wilderness Trail and the Chalone Peak Trail would be constructed under this alternative. The monument expects that this trail would be rarely used by visitors (much like the North Wilderness Trail). Therefore, it would have a minor adverse effect on this quality.

Trail maintenance and resource management projects sometimes use mechanized equipment in wilderness. Although these projects are evaluated and approved using a minimum requirement / minimum tool analysis, they have localized, short-term impacts on both the undeveloped quality of wilderness and opportunities for solitude and unconfined recreation. As discussed later in the soundscape analysis, some portions of designated wilderness, particularly in the High Peaks area, would continue to experience unintentional operational and visitor use noise impacts due to their proximity to popular areas and the character of the rocky canyon landscape which carries sound from the canyon bottoms upward. Adverse impacts on this wilderness quality would range from minor to moderate. Likewise, minor to moderate visual impacts, including dark sky pollution and loss of visibility due to air pollution, occur from activities outside of wilderness.

Visitor use restrictions in wilderness, including current bans on camping and visitor stock use, diminish “unconfined” recreational opportunities, resulting in minor to moderate adverse impacts. These restrictions, along with temporary closures to protect vulnerable bat and bird populations, constitute minor to moderate adverse impacts on this wilderness quality, but are often necessary to protect the natural quality of wilderness character or to meet park mandates.

WILDERNESS CHARACTER – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Under alternative B, the monument would focus on protecting and enhancing wilderness values. The minimum requirement analysis would continue to be used to determine if, when, and how actions that might impact wilderness character could be implemented.

Untrammeled

Impacts would be the same as in alternative A. No additional actions under this alternative would impact the untrammeled quality of wilderness beyond its current condition.

Undeveloped

The impacts on this wilderness quality would largely be the same as described under alternative A, although the potential for future additional non-recreational development impacts is diminished by a broad application of primitive zoning throughout the monument.

Natural

The impacts on this wilderness quality would largely be the same as described under alternative A.

Solitude or a primitive and unconfined type of recreation

As in alternative A, a nearly two-mile long South Wilderness Trail connection to the Chalone Peak Trail would be constructed. To the north, a new McCabe Canyon trail would connect the campground with the North Wilderness Trail. Approximately five miles of this trail would be located in designated wilderness. Because the wilderness portions of these trails are remote, they would be lightly used and would be constructed to be narrow and unobtrusive in character, resulting in minor long-term adverse effects.

Opportunities for visitors to experience wilderness would continue to be abundant and, in some cases, would be enhanced. Alternative B would provide high quality backcountry experiences by minimizing development and infrastructure and reducing crowding. The use of research equipment in the field would be

minimized under this alternative. New uses and large group facilities are not accommodated in this alternative, reducing the potential levels of use compared to alternatives C and D. More of the monument would be zoned primitive, reducing opportunities for recreational development, group use, and motorized vehicles throughout the monument, all of which impact solitude in adjacent wilderness areas. New east side facilities outside of designated wilderness would not impact this quality because the visible development footprint would not change substantially, nor would these facilities be designed to promote or support higher levels of wilderness use. Removal of the Chaparral parking area on the west side would enhance this wilderness quality by relocating development and concentrated visitor use further from the adjacent wilderness boundary. North Chalone Peak would be restored, improving previously impacted viewsheds from designated wilderness.

WILDERNESS CHARACTER - IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Under alternative C, the monument would focus on providing a wider variety of visitor experiences, including high quality wilderness experiences and backcountry camping. The minimum requirement analysis would continue to be used to determine if, when, and how actions that might impact wilderness character could be implemented.

Untrammeled

The impacts on this wilderness quality would be the same as described under alternative A.

Undeveloped

The impacts on this wilderness quality would be the same as described under alternative A.

Natural

The impacts on this wilderness quality would be the same as described under alternative A.

Solitude or a primitive and unconfined type of recreation

Opportunities for visitors to experience wilderness would continue to be abundant and, in some cases, would be enhanced.

As in alternative B, the South Wilderness Trail connection to the Chalone Peak Trail and a McCabe Canyon trail would have minor long-term adverse effects. Alternative C would also include a trail to access the peak of Mt. Defiance, creating a short loop with the South Wilderness trail. Most of this trail’s approximately three miles would be located in designated wilderness. This trail may attract slightly more visitors

than the other new wilderness trails due to its easier access, but would not have appreciably greater impacts.

A few backcountry campsites could be constructed, potentially in designated wilderness. These primitive campsites would have minimal development footprints and would require further environmental analysis prior to location and construction. Backcountry campsites would have a long-term, minor, adverse impact on this wilderness quality. Backcountry camping would also benefit this quality by opening up a mode of wilderness recreation previously not allowed in the monument.

The new Mount Defiance trail would provide a new moderate-length opportunity to experience wilderness in a previously inaccessible area. New east side facilities outside of designated wilderness would adversely impact this quality through slight modification of wilderness viewsheds. Because most non-wilderness development would take place in previously developed footprints (campground reconfiguration and replacement visitor center) or on the bottomlands (away from designated wilderness), impacts would be negligible to minor. Removal of the Chaparral parking area on the west side would enhance this wilderness quality by relocating development and concentrated visitor use further from the adjacent wilderness boundary. Constructed out of sight of trails, backcountry campsites would have minor adverse effects on opportunities for solitude. Further design, analysis, and environmental compliance would be required to determine locations and scope.

Most of the High Peaks and McCabe Canyon areas are zoned semi-primitive under this alternative, allowing trail design and backcountry management to serve larger group sizes and higher numbers of people at one time. While the intent of this zoning is to allow the highest number of visitors to experience this part of the Pinnacles Wilderness while protecting wilderness character, some degradation to solitude, along with some beneficial effects on the availability of primitive unconfined recreation, would occur with increased use. The adverse impacts due to crowding and user conflicts would be minor to moderate.

WILDERNESS CHARACTER - IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

As in alternative C, the monument would continue to provide high quality wilderness experiences and would introduce backcountry camping. A minimum requirement analysis would continue to be used to determine if, when, and how actions that might impact wilderness character could be implemented.

Untrammelled

Impacts under alternative D would be the same as described in alternative A.

Undeveloped

Impacts under alternative D would be the same as described in alternative A.

Natural

Impacts under alternative D would be the same as described in alternative A.

Solitude or a primitive and unconfined type of recreation

Impacts under alternative D would be the same as described in alternative C, except that the Mount Defiance trail would not be built and slightly more primitive zoning would be applied throughout the monument.

WILDERNESS CHARACTER – CUMULATIVE IMPACTS

Regional population growth is expected to increase visitation at a rapid pace. Changing demographics would bring an ever greater number and diversity of recreational users to the monument and the Pinnacles Wilderness. These changes have the potential to affect wilderness character by increasing crowding, user conflicts, and resource degradation due to higher use levels. In addition, development along the monument boundary, visible from designated wilderness within the boundary, would likely continue to increase incrementally. The potential for landscape-scale changes, especially from invasive species, fire suppression, prescribed fire, climate change, dark sky pollution, and decreased visibility due to air pollution, would continue to exist. These factors would continue to contribute to minor to moderate adverse impacts, particularly to the qualities related to primitive and unconfined recreation, solitude, and development. None of the action alternatives would add appreciably to this impact. Therefore, cumulative impacts under alternatives B, C and D would remain minor to moderate, similar to alternative A.

WILDERNESS CHARACTER – CONCLUSION

Alternative B provides the greatest benefits and the least adverse impacts on wilderness qualities of the four alternatives, followed by alternative A. Alternatives C and D do not appreciably differ among the four wilderness qualities, except that solitude, in certain areas, would potentially be diminished by the adverse effect of accommodating semi-primitive (rather than primitive) zoning in alternative C.

Natural Resources

Air Quality

The area of consideration for this impact topic is the region. Changes to baseline data and/or national standards from proposed actions as measured at authorized stations would constitute impacts on air quality. The thresholds of change for the intensity of an impact are as follows.

Negligible: There would be no perceptible visibility impacts above background conditions.

Minor: There would be slightly perceptible visibility impacts on less than 180 days per year.

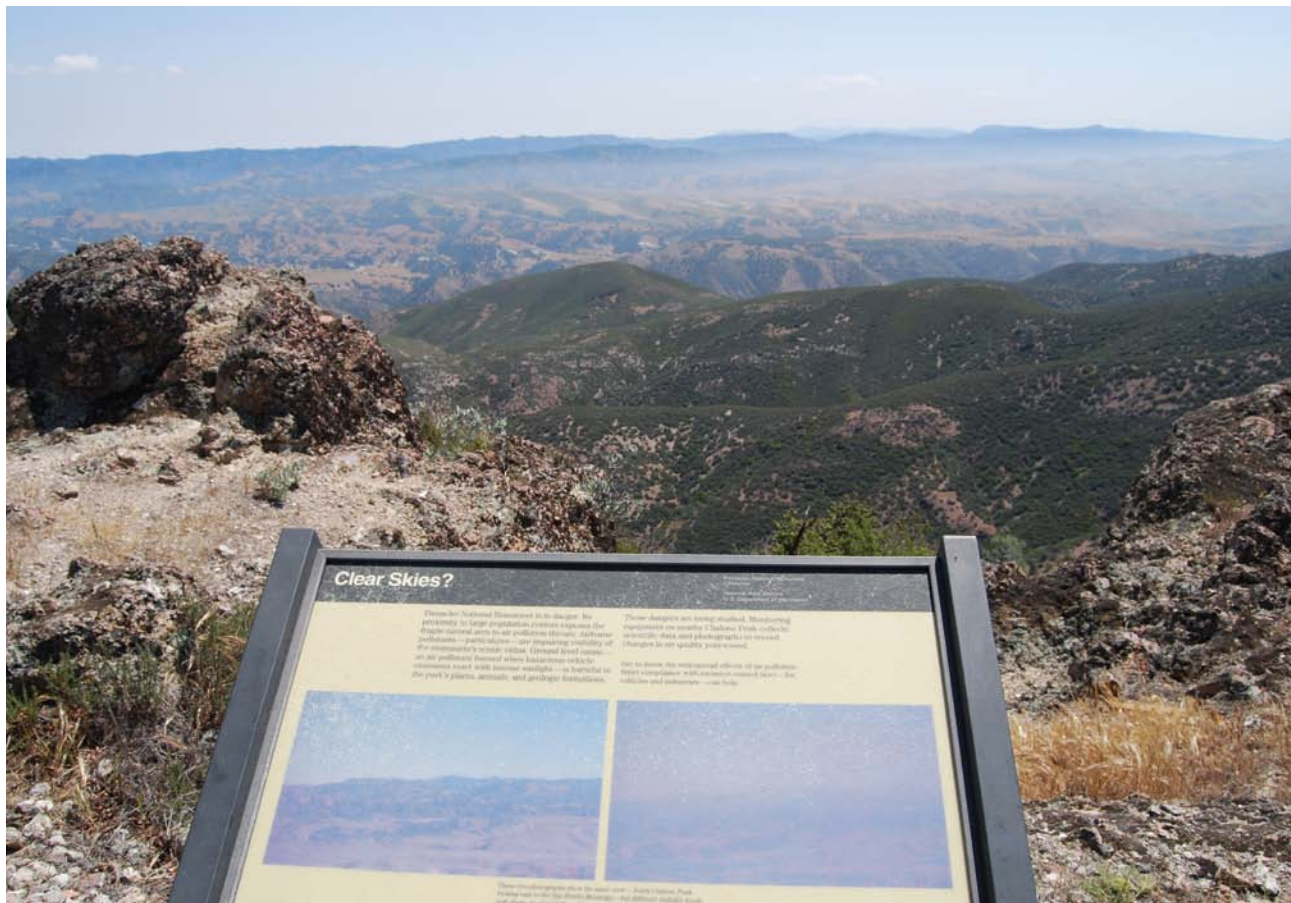
Moderate: There would be moderately perceptible visibility impacts on less than 180 days per year or slightly perceptible visibility impacts on 180 days or more per year.

Major: There would be highly perceptible visibility impacts on 180 or more days per year.

AIR QUALITY – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Because it contains designated wilderness, Pinnacles National Monument is one of 48 units of the National Park System designated as a mandatory Class I area for air quality (USEPA, 2002) under the 1977 Clean Air Act Amendments (CAAA). Class I airsheds receive the greatest protection under the CAAA, and the NPS is required to do all it can to ensure that air quality-related values are not adversely affected by air pollutants. To this end, NPS personnel review all permit applications for industrial or other facilities that may contribute to the deterioration of air quality in the region surrounding the monument.

Of particular concern in class I areas is visibility, which is critical to preserving views of outstanding scenery and landscapes for which national parks are famous. Both the scattering and the absorption of light by particles in the atmosphere reduce visibility. Impacts on air quality arise from the introduction of pollutants into the air from sources such as combustion and activities that create airborne dust. The impacts of air pollution fall off exponentially with distance from the source, although factors such as air circulation patterns concentrate pollutants in some areas more than others.



Interpretive display of "Clear Skies" overlooking Pinnacles NM. NPS photo.

In this alternative, no new action would occur that would increase the degradation of air quality and visibility within the monument. Sources of air pollution within the monument tend to be small but, due to proximity, may have noticeable effects, especially when locally concentrated due to atmospheric conditions. The primary sources of pollution arising from within the monument are from motor vehicles, including visitor, staff, and shuttle uses, and campfires/barbecues. Due to the relatively low level of vehicle use by visitors and NPS staff, vehicles do not produce detectable levels of air pollution within the monument. When atmospheric inversion conditions exist in the vicinity of the Pinnacles Campground, however, smoke from campfires may be concentrated there and in adjacent areas in the valley bottoms, as well as where the resulting layer of smoke meets the edges of the valley. These adverse impacts are short-term and minor to moderate in nature, occurring much less than 180 days per year. These impacts are minimized by a prohibition on campfires during the summer since they only occur intermittently during the camping season.

In alternative A, because there would be no changes in the number or types of facilities that produce air pollutants or the way these are used in the monument, there would be no change in local pollution sources. No new roads would be constructed or opened to traffic, therefore vehicle miles driven on monument roads would remain similar (associated only with increased visitation from the ever-increasing surrounding population) and no new sources of pollution, such as campground or picnic (barbecue) facilities would be constructed.

Although NPS fire management activities which result in the discharge of air pollutants (e.g. smoke, carbon monoxide, and other pollutants from fires) would continue, these are subject to, and must comply with, all applicable federal, state, interstate, and local air pollution control requirements, as specified by Section 118 of the Clean Air Act, as amended (42 USC 7418). Direct adverse impacts on air quality under this alternative would continue to be short term, and minor to moderate. These impacts would be dependent on fuel loading and burn intensity and duration. Under current policy, if national ambient air quality standards (NAAQS) cannot be met during treatment with prescribed fire or fire incidents or if visibility thresholds would be exceeded, ignition would be halted and the burn would be suppressed or contained. Prescribed fires ignited to meet resource and protection objectives (i.e., hazard fuel reduction, etc.) and naturally ignited wildfires managed for resource benefits can collectively reduce years of fuel accumulation. This can result in long-term benefits to regional and local air quality by spreading out emissions over time, rather than from a larger wildfire at one time.

AIR QUALITY – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

As in alternative A, the current level of localized and minor to moderate adverse air quality impacts due to vehicles, campfires, and barbecues would continue. In addition, there would continue to be minor to moderate impacts from the fire management program. Although some parking areas would be removed, moved or reconfigured (Chaparral and Moses Spring), there would be little effect on total vehicle miles driven. Alternative B would also have additional short-term negligible to moderate localized impacts, including from exhaust, evaporative and particulate emissions from construction of new facilities. The short-term impacts associated with visitor center and day use construction on the east side would be greater than those associated with modifications to historic structures and trails.

Also, under alternative B, an increased focus of interpretation and education on wilderness values (including clean air and clear skies with unimpeded views) and on audiences outside the monument could have a long-term beneficial impact on reducing air quality impacts through increased regional awareness and opportunities for collaboration.

AIR QUALITY – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

The impacts under alternative C would be similar to those described under alternatives A and B with the additional potential for adverse impacts from a small walk-in campground on the west side combined with some additional beneficial impacts. This new campground would, if campfires were allowed, result in occasional short-term localized negligible to minor adverse air quality impacts. Additional picnicking in this alternative would also result in a slight increase in air quality emissions if more use of barbecue grills occurred.

New parking areas to facilitate visitor use near the replacement East Pinnacles visitor center and campground could result in somewhat lower exhaust emissions, with more visitors likely to find parking spaces and utilize the shuttle system than in alternatives A or B.

Alternative C would have the highest level of short-term, adverse impacts related to construction. Construction of trails and structures, including an east side entrance station, equestrian facilities, an east side visitor center, a walk-in campground on the west side, and picnicking facilities would create minor to moderate localized adverse impacts.

Overall, adverse impacts on air quality under alternative C would be minor to moderate.

AIR QUALITY – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

The impacts under alternative D would be the same as those described under alternative C, with slightly fewer construction-related impacts. As in alternative B, roads would be very slightly reduced by the elimination of the Chaparral parking area, having little effect on total visitor vehicle miles driven. Overall, adverse impacts on air quality under alternative D would be minor to moderate.

AIR QUALITY – CUMULATIVE IMPACTS

Based on monitoring since 1987, most of the year Pinnacles National Monument has superb “class I” air quality. The NPS Air Quality Division and EPA established a monitoring station near the east entrance in 1987. An air clarity study (using a transmissometer) was completed. Particulate, ozone, dry and wet deposition, and meteorological monitoring continues. Occasionally north winds and a persistent inversion layer draw air pollutants from the Santa Clara Valley into the monument. This usually happens in the summer, and in recent years Pinnacles has had as many as four nonattainment days, when the air quality standard exceeded federal levels. Despite the occasional hazy days, the air quality at Pinnacles is a defining feature of the park and an important resource. However, an encroaching urban landscape due to rapid population growth is steadily decreasing the distance between pollution sources and the park, with a resulting trend towards declining air quality (NPS 1999a), resulting in a minor to moderate long-term adverse effect. All alternatives have short-term, localized, minor to moderate adverse effects, which would not add appreciably to the adverse impacts from outside the monument. Alternative B, however, would have the greatest beneficial effect on cumulative impacts by promoting regional education on wilderness-related values. Overall cumulative impacts would remain minor to moderate in all alternatives.

AIR QUALITY – CONCLUSION

Most impacts are cumulative and originate from outside of the monument. Thus, impacts do not vary substantially among the alternatives. Most impacts due to actions in the alternatives would be localized and would arise from fires, barbecues, and vehicle use as well as from construction projects. While vehicle use doesn’t change markedly among alternatives, alternatives C and D would add camping to the west side, adding impacts from campfire smoke in an area currently unaffected by campfires. Adverse impacts under all alternatives would be localized and minor to moderate.

Dark Night Skies

The area of consideration for this topic is the monument. Potential impacts from management actions are based on professional judgment and experience with similar actions. The thresholds of change for the intensity of an impact are as follows:

Negligible: The effects would be barely detectable and have no discernible effect on dark night skies.

Minor: The effects would be slightly detectable, but wouldn’t have an overall effect on dark night skies.

Moderate: The effects would be clearly detectable and could have an appreciable effect on dark night skies.

Major: The effects would have substantial, highly noticeable influence and could permanently alter dark night skies.

DARK NIGHT SKIES – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Impacts on dark night skies are typically associated with unshielded and high output lighting on facilities, roads, and residences. Glare and impacts due to light pollution increase near developed areas within the monument. Remote areas of the monument often provide high-quality dark night sky experiences.

In alternative A, no new development is proposed that would increase degradation of dark skies or nocturnal habitats within the monument. There would be ongoing beneficial effects from existing reduced output lamps or shields from reduced glare levels. In the campground, low levels of impact temporarily occur with high visitation levels. Night lighting from monument operations, vehicles, and camping activities would continue to have minor long-term adverse impacts on the monument’s dark skies, as these impacts do not have an appreciable or noticeable effect.

DARK NIGHT SKIES – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCE)

In alternative B, the monument would reduce its development footprint. Some facilities could be removed (Chaparral parking lot, unused buildings, swimming pool), resulting in beneficial impacts when accompanying lights or vehicle use is removed. New or replacement facilities (e.g. East Pinnacles visitor center) would be limited to existing development footprints and would incorporate previously described mitigation strategies, resulting in no change to the current negligible to minor long-term adverse impacts on dark skies.

Interpretation and education would be focused on wilderness values, including dark night skies, and an effort would be made to provide more education outside of the monument and to encourage night lighting ordinances in nearby communities. This focus on educating local communities about wilderness values and lighting ordinances could have a beneficial impact on dark night skies through increased local awareness and opportunities for collaboration.

DARK NIGHT SKIES – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

New or replacement infrastructure development in this alternative includes a visitor center between Highway 25 and the campground and an entrance station near the monument entrance. These developments would be served by additional parking in the vicinity of the visitor center. The Bacon house would be adaptively reused as office space for monument staff. Lighting on these facilities could increase emissions of stray light in localized areas. The equestrian improvements would not be lit. As in the other action alternatives, the monument would follow dark night sky protocols to reduce impacts, keeping adverse impacts at negligible to minor levels. An emphasis on serving multiple audiences with increased interpretive and educational programming could have long-term beneficial impacts, if such programming raises local awareness of dark night sky issues.

DARK NIGHT SKIES – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

New infrastructure development in alternative D is nearly the same as alternative C. As with alternative C, these improvements would have long-term negligible to minor localized impacts on dark night skies, depending on the outside lighting designs and the types of fixtures used.

DARK NIGHT SKIES – CUMULATIVE IMPACTS

The projected rapid population growth in the Salinas Valley is expected to produce an increase in light pollution from adjacent communities and residences, particularly as new development encroaches on the monument boundary. Minor to moderate adverse impacts can be expected from future development. The monument is currently working with local communities to adopt light ordinances and would continue to do so. Alternative A would contribute no additional adverse impacts on dark night skies, while alternatives B, C, and D would contribute negligible to minor cumulative adverse impacts on dark night skies. Overall impacts would remain minor to moderate under all alternatives.

DARK NIGHT SKIES – CONCLUSION

Alternatives C and D would have the greatest impacts on the monument's dark night skies due to development, including some areas on the bottomlands that haven't been lit since acquisition by the monument. Impacts under these alternatives would be adverse, long-term, and minor. Alternative B would have the least adverse impact, due to the removal of structures and the most restrictive zoning outside of designated wilderness. Impacts under alternatives A and B would be adverse, long-term, and negligible to minor. Increased education and outreach efforts under alternatives B, C and D could have some positive effects, if such efforts influenced local community ordinances.

Geological Resources and Soils

The area of consideration for this topic is the monument. Potential impacts from management actions are based on professional judgment and experience with similar actions. The thresholds of change for the intensity of an impact are as follows:

Negligible: The action could result in a change to a geologic feature or process, but the change would be so small that it would not be of any measurable or perceptible consequence.

Minor: The action could result in a change to a geologic feature or process, but the change would be small and localized and of little consequence.

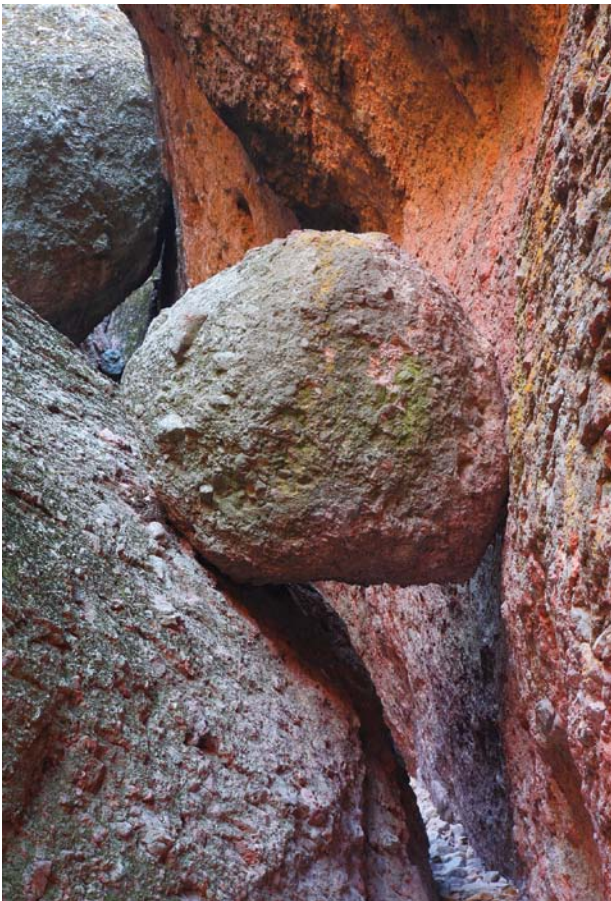
Moderate: The action would result in a change to a geologic feature or process; and the change would be measurable and of consequence.

Major: The action would result in a noticeable change to a geologic feature or process; the change would be measurable and the level of disturbance would be severe.

GEOLOGICAL RESOURCES – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Many of the monument's primary visitor sites are non-renewable geologic features. This includes the High Peaks, climbing routes, Bear Gulch Cave, and Balconies Cave. The elements of alternative A would have minor adverse impacts on the monument's geologic resources. The geologic features of the monument would likely continue to be worn, damaged, and/or degraded by visitor activities in localized areas, particularly adjacent to existing trails, near visitor facilities, around climbing locations, and wherever social trails exist.

Construction of the South Wilderness Trail connection would not impact geological resources.



Boulder wedged in Balconies Cave, demonstrating how talus caves are formed. Photo by Gavin Emmons © 2011.

Climbing use would continue to be managed through the Climber Access Plan and Raptor Monitoring Protocol until a Climbing Management Plan is completed. Climbing-related activities, such as drilling for the placement of bolts, sometimes cause pieces of rock to break off and may increase erosion rates at bolting sites, potentially resulting in minor long-term adverse effects.

GEOLOGICAL RESOURCES – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

The addition of new trails may provide more climber access, increasing the area impacted by climber-associated activity. As noted above, climbing occasionally causes rock to break off and may increase erosion at bolt sites. Because most of the rocks suitable for climbing occur in the core of the park and are currently accessible to climbers, any potential future adverse effects to geological resources would likely be minor.

Most new trails would be in valley bottoms on alluvial fill material, which would not result in impacts on geologic resources. Some trails, however, may be located

through rocky areas, requiring some cutting into rock and resulting in minor long-term adverse impacts.

Adding a physical scientist to the staff would provide long-term beneficial effects from an increased ability to proactively monitor and respond to geologic impacts.

GEOLOGICAL RESOURCES – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Under this alternative, potential localized negligible to minor adverse effects from trail construction and climbing access would be the same as described in alternative B, although slightly more new trail access is proposed. In addition, backcountry camping under this alternative has the potential to increase climber access to rocks. Because backcountry campsites are likely to be sited in areas distant from potential climbing areas, there would be negligible effects from climbing on geologic resources.

The new walk-in campground on the west side, however, would have a greater potential for impact. Former camping on the west side was often used by rock climbers and the same use could be expected in the future. Camping makes it more convenient for climbers to remain at Pinnacles, increasing the number of participants and the duration of time spent on the rocks. Although the effects of climbing on the monument's geologic resources are largely unknown, it is possible that there would be additional minor adverse impacts. In addition, authorization of commercial sale of climbing gear in the monument could increase similarly negligible impacts by making it easier for more visitors to climb. Zoning more of the High Peaks area as semi-primitive, would allow for higher use levels by individuals and groups and the associated negligible use impacts due to wear.

As in alternative B, adding a physical scientist to the staff would have long-term beneficial effects.

GEOLOGICAL RESOURCES – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts on geological resources under alternative D are likely to be very similar to the impacts described under alternative C. Additional trails, a small number of backcountry campsites, a walk-in campground on the west side, and commercial sale of climbing gear are all actions likely to result in a small increase in climbing activity and minor short- and long-term adverse impacts. Unlike alternative C, however, more of the monument would be zoned primitive, an indirect long-term beneficial effect from a decreased emphasis on increasing visitor capacities. As in the other action alternatives, beneficial effects would also occur from adding a physical scientist.

GEOLOGICAL RESOURCES – CUMULATIVE IMPACTS

Regional increases in air pollution may increase erosion through the effect of pollutants on rock, or may otherwise alter natural erosional processes by, for example, adversely impacting lichens. These effects are negligible to minor and adverse. The actions described in the alternatives above are not expected to add to the effects of pollution on rock surfaces in any perceptible way. Alternatives A and B would have minor long-term adverse effects on geological resources; and impacts in alternatives C and D would be slightly higher. Adverse impacts in alternatives B, C, and D would be partially offset by the addition of a physical scientist to the park staff. Overall cumulative impacts would remain minor under all alternatives.

GEOLOGICAL RESOURCES – CONCLUSION

Most of the monument's geologic resources would not be affected by the actions in the alternatives. Some features could be degraded or altered due to new developments, access opportunities, and increased visitor use in localized areas. These adverse impacts would be minor and long-term, although impacts could be slightly higher in alternatives C and D due to more trail development.

SOILS – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Soils would likely continue to be disturbed, compacted, and eroded by visitors in localized areas, particularly along existing trails, near visitor facilities, and near social trails. Monument staff and visitors would continue to use existing trails and social trails, producing long-term, negligible to minor, adverse impacts, as long as travel is dispersed and infrequent. In some areas, new visitor-created, social trails may form with increased visitation or changes to visitation patterns, particularly in areas with high visitor use. These long-term, adverse visitor impacts on soils would likely be minor and limited in extent. A new South Wilderness Trail connection could also have localized negligible to minor impacts on soils.

SOILS – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

As in alternative A, soils would continue to be disturbed, compacted, and eroded by visitors in localized areas, particularly along existing trails, near visitor facilities, and in the vicinity of social trails. In alternative B, some soils would be degraded or lost to compaction, disturbance, erosion, or substantially altered in local areas due to development of new trails, relocation of the Chaparral parking area, and removal of buildings and structures. Site preparation and landscaping work would disturb soils temporarily, and

soils would be modified in the footprint. Construction equipment would also disturb and compact soils in proposed project areas. With mitigation required by policy, these actions would have minor to moderate, adverse, short-term impacts on soils. Restoration of the Chaparral and Moses Spring parking areas to natural surfaces would have long-term beneficial impacts.

Efforts to remove social trails would help reduce soil degradation and result in long-term, localized, beneficial impacts on soils. Compaction and disturbance would be reduced compared to present conditions, a long-term, and beneficial effect. Instituting and monitoring user capacity indicators and standards should help ensure that an unacceptable increase in the number of visitor-created trails (and resulting increased soil disruption) does not occur. Compared to the no-action alternative, this alternative would result in a long-term, beneficial effect.

In some areas of the monument, new social trails may be created as visitation patterns change and new access trails are built. The long-term, adverse impacts on soils would likely be negligible to minor and localized.

Adding a physical scientist to the staff would result in an increased ability to proactively protect, monitor and respond to soil impacts, providing a beneficial long-term effect.

SOILS – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

In alternative C, some soils would be lost to degradation or substantially altered in local areas where ground disturbance occurs due to the development of new or expanded facilities, or the removal of facilities. Expanded recreational opportunities and additional trails could lead to minor to moderate adverse impacts. Diversification and intensification of recreational use could have minor to moderate impacts on soils along newly designated trails and adjacent areas. New construction of facilities in previously undisturbed areas, including an entrance station on the east side, new trails, primitive campsites on the west side, back-country campsites, and equestrian staging areas, would cause minor to moderate, long-term, adverse impacts on the immediate area and minor, long-term impacts radiating outward from the sites. Other actions would occur in areas that have already been disturbed. These include facility improvements and redesign in the east side campground area. Little additional soil disturbance would be required for these projects, resulting in minor, long-term, adverse impacts on soils.

As in alternatives A and B, soils in the monument would likely continue to be compacted and degraded by hikers in local areas, such as along the sides of trails,

an ongoing minor adverse impact. In some areas, new social trails may form with increased visitation and new designated trails, particularly in areas with high visitor numbers. Instituting and monitoring user capacity indicators and standards would ensure that an unacceptable increase in the creation of visitor-created trails does not occur. Compared to the no-action alternative, this mitigation measure would result in a long-term, beneficial effect.

In this alternative, an equestrian trail would be constructed in the bottomlands area. Some portions of the trail would necessarily follow drainages and climb hill slopes, leading to the potential for new impacts from erosion. These adverse impacts could be minor to moderate, due to accelerated vegetation loss, trail widening, erosion, muddiness, and informal trail development often associated with equestrian use.

As in alternative B, adding a physical scientist would have beneficial long-term effects.

SOILS – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts on soils in alternative D would be the same as those in alternative C, with a few exceptions. Alternative D does not include equestrian use. Because more of the monument would be zoned primitive, there could be reduced trail use in some areas. Overall adverse impacts in alternative D would be minor to moderate, with the same beneficial effects as in alternative C.

SOILS – CUMULATIVE IMPACTS

Soils throughout the monument have been altered by past grazing practices and infrastructure development. The loss and alteration of soils due to past land uses and ongoing management actions under the alternatives would result in minor to moderate, adverse cumulative impacts on area soils.

When the potential minor long-term adverse effects from actions in alternatives A and B are added to past and future impacts external to the monument, there would continue to be a localized, minor to moderate, adverse overall cumulative impact on area soils. Alternatives C and D would have minor to moderate long-term adverse effects, which would not add appreciably to the minor to moderate cumulative impacts described above.

SOILS – CONCLUSION

Most of the monument's soils would not be affected by the actions proposed in these alternatives. In some areas, however, soils would be compacted and

disturbed, and soil properties would be altered due to new developments and increased visitor use in localized areas such as along trails.

In alternatives A and B, adverse impacts would likely be minor, adverse, and long-term, with somewhat more potential for impacts in alternative B due to a higher level of trail development.

Alternative C would have a higher level of impacts, as well as the addition of equestrian use and a similar level of trail development to alternative B. These adverse impacts would likely be minor to moderate and long-term. Alternative D would have the same overall level of impact, but without equestrian use.

Establishing and monitoring user capacity indicators and standards would prevent the establishment of new visitor-created (social) trails and prevent resulting soil degradation resulting in long-term beneficial effects. Cumulative impacts would be long-term, minor to moderate, and adverse.

Hydrologic Systems and Processes, Including Wetlands and Floodplains

The area of consideration for this topic is surface waters within the monument. Available information on surface hydrologic systems, including surface hydrology, wetlands, and floodplains, was compiled. Potential impacts from management actions are based on professional judgment and experience with similar actions. The primary sources of impacts on hydrologic systems at the monument arise from modifications to streams and wetlands or changes to the flow, amount and/or timing of water and/or debris flowing into them. Modifications to streams and wetlands include structures in stream channels such as bridges and riprap or structures on floodplains such as buildings and elevated roads or trails, while the amount and/or timing of water or debris flowing into water may be affected by the amount of vegetation or paved areas in a watershed. The thresholds of change for the intensity of an impact are as follows.

Negligible: Effects on hydrologic systems, floodplains, or wetlands would be at or below the level of detection, would occur in a small area, and the changes would be so small that they would not be of any measurable or perceptible consequence.

Minor: Effects on hydrologic systems, floodplains, or wetlands would be detectable, but localized, small, and of little consequence.

Moderate: Effects on hydrologic systems, floodplains, or wetlands would be readily detectable and have

localized consequences or a measurable change to a hydrologic system.

Major: Effects would be obvious and would have widespread, substantial consequences on hydrologic systems, floodplains, or wetlands that would result in either a severely adverse or beneficial impact with regional consequences.

HYDROLOGIC SYSTEMS AND PROCESSES – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Under alternative A, no new structures are planned that would either affect stream flow, alter or be developed in floodplains, affect wetlands, or increase the amount of hardened surfaces in the monument, with the exception of the South Wilderness Trail connection which would mostly be located on ridge tops and would have a negligible to minor localized adverse impact in a small area.

HYDROLOGIC SYSTEMS AND PROCESSES – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Alternative B includes the possibility of removing/reconfiguring the Moses Spring parking lot to restore hydrologic processes in Bear Creek and to reduce impervious surfaces in Bear Gulch. This would produce long-term beneficial impacts on hydrology and restore natural floodplain and wetland values to the current parking area and below.

The Chaparral parking area and approach road would also be removed, allowing West Fork Chalone Creek to access its floodplain in that area and reducing hardened surface area on the west side, with expected long-term beneficial impacts on hydrology from increased infiltration and slower runoff.

Removal of the Chalone Peak fire lookout along with restoration of that site, as well as restoration of more perennial grasses in the bottomlands and along Sandy Creek, would have long-term beneficial impacts by reducing erosion due to storm runoff and increasing percolation in the former case and increasing resilience to the erosive nature of episodic flood events in the latter.

If the campground swimming pool is removed, long-term, minor to moderate, adverse impacts on streambanks in Sandy Creek and Chalone Creek could occur if visitors and campers enter those waters instead to cool off, increasing erosion along steep streambanks.

Alternative B includes the construction of additional trails in up to five areas. Trails sometimes alter runoff from hillsides and can also increase erosion. NPS

Management Policies, however, require the monument to build sustainable trails that minimize these effects. These trails would also be subject to further environmental analysis as they are planned and designed. As a result, the trails would likely have minor, long-term, adverse effects.

The addition of a physical scientist to the staff would result in an increased ability to monitor, respond and proactively protect hydrologic systems and processes, providing a beneficial long-term effect.

HYDROLOGIC SYSTEMS AND PROCESSES – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Equestrian use and bicycling on the bottomlands administrative road, as proposed in alternative C, could contribute to increased erosion, especially during the wet season when roads are muddy. These effects would be largely mitigated by limiting use when trail conditions are wet and because the proposed trail does not have any in-stream water crossings. Therefore, equestrian and bicycle use on the bottomlands park road would likely have negligible, long-term, adverse impacts.

Similar to alternative B, the construction of additional trails would have minor, long-term, adverse effects.

Construction of new or replacement facilities such as the East Pinnacles visitor center, backcountry campsites, picnic facilities, equestrian facilities, entrance station, and shuttle stop structures would take place on level ground outside of the 100-year floodplain and would therefore have minor adverse impacts on hydrologic systems and processes. Hardened parking, road widening, and pullouts to support these new services, however, would add to the amount of impervious surfaces on the east side and produce long-term, moderate, localized adverse effects. Additional environmental analysis would occur to support proposed construction once designs have identified building and circulation footprints.

The west side walk-in campground would be located and designed to minimize impacts on water resources but would increase the amount of bare ground and could contribute to additional runoff from compaction.

As in alternative B, removal of the Chaparral parking area, comfort station, picnic area, and approach road and the addition of a physical scientist to the staff would have long-term beneficial impacts on hydrologic systems and processes.

HYDROLOGIC SYSTEMS AND PROCESSES – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Similar to Alternatives B and C, construction of additional trails would have minor long-term adverse effects on hydrologic systems and processes.

As in alternative C, the construction of new or replacement facilities such as the East Pinnacles visitor center, entrance station, and shuttle stop structures would be outside the 100-year floodplain and would have minor to moderate long-term adverse impacts on hydrologic systems and processes from construction and from associated impervious surfacing for circulation. A better understanding of these impacts will result from additional environmental analysis. Because these facilities would be slightly smaller, there would be fewer impacts than in alternative C. However, these impacts would likely remain minor to moderate, and adverse.

Beneficial effects, similar to alternatives B and C, would include removal of the Chaparral parking area, comfort station, picnic area, and approach road and the addition of a physical scientist to the staff would have long-term beneficial impacts on hydrologic systems and processes.

HYDROLOGIC SYSTEMS AND PROCESSES – CUMULATIVE IMPACTS

Due to the generally steep terrain at the monument, most development has occurred in the relatively flat valley bottoms where it is most likely to impact hydrology. Many of the buildings, as well as roads, trails, parking lots, bridges, culverts, riprapped stream banks, and rock walls contribute cumulatively to degraded hydrologic function. These past actions have led to localized moderate, long-term, adverse impacts where these facilities occur within the monument. Alternatives A and B would contribute negligible to minor adverse effects on hydrology, while alternatives C and D could have moderate adverse impacts. The action alternatives would mitigate some impacts by the removal of some buildings and facilities, such as reconfiguration of the Moses Spring parking area (alternative B), removal of some facilities at Chaparral located in the floodplain (alternatives B, C and D), and constructing facilities out of floodplains (alternatives B, C and D). Compared to the effects of past development, however, these actions and modifications would not add appreciably to existing impacts on hydrological systems and processes. As a result, overall cumulative impacts under all alternatives would remain moderately adverse, with some long-term beneficial effects.

HYDROLOGIC SYSTEMS AND PROCESSES – CONCLUSION

Each alternative would benefit hydrologic systems and processes in some way. Long-standing cumulative impacts, due to the history of bottomland development both in the monument and by neighboring ranches, would continue to have moderate cumulative adverse impacts.

Alternative A would not contribute further impacts because it does not propose additional development that would affect hydrologic systems, floodplains, or wetlands. Alternative B combines increased restoration efforts, and associated beneficial impacts, with a limited amount of trail and recreation development, resulting in negligible to minor adverse impacts. Alternatives C and D propose more development, including a larger east side visitor center, a west side walk-in campground, and new trails, with moderate adverse impacts.

Water Quality

The area of consideration for this topic is the monument. Available information on water quality in the monument was compiled. Potential impacts from management actions are based on professional judgment and experience with similar actions. The thresholds of change for the intensity of an impact are as follows.

Negligible: Impacts (chemical, physical, or biological effects) would not be detectable, would be well within water quality standards or criteria, and/or would be within historical or desired water quality conditions.

Minor: Impacts (chemical, physical, or biological effects) would be detectable, but would be well within water quality standards or criteria, and/or within historical or desired water quality conditions. Short-term impacts would diminish quickly.

Moderate: Impacts (chemical, physical, or biological effects) would be detectable, but would generally be within water quality standards or criteria. There could, however, be short-term alteration of baseline or desired water quality conditions that would last longer or would be more widespread.

Major: Impacts (chemical, physical, or biological effects) would be detectable and long-term, or would be altered from the historical baseline or desired water quality conditions. Chemical, physical, or biological water quality standards or criteria would be periodically exceeded.

WATER QUALITY – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Because water is relatively scarce in the environment, effects of management actions would continue to be localized and would affect specific water bodies, such as the Bear Gulch Reservoir, or Bear, Sandy or Chalone creeks. Surface water would continue to be affected by existing recreational use and existing development.

Maintaining access to and retaining facilities in the current condition would be unlikely to increase impacts on water quality. Long-term impacts in the monument would continue, including effects from development located in the floodplain that would continue to alter the passage and quality of water flow in some areas. In these areas water would flow around, rather than seep into the ground, thereby picking up and discharging contaminants into nearby water bodies more quickly, depending on how close these are to roads and parking areas. In these locations, contaminants in storm water from vehicle fluids that are deposited on hardened or surfaced and gravel roads would alter water quality conditions, including chemical and physical properties, with long-term negligible to minor impacts, during

and following storms. Periodic storms could also cause dust from gravel roads in the bottomlands to wash into nearby streams, affecting turbidity. Ongoing erosion associated with existing facilities, such as trails, would also continue to occur.

Periodically, water quality at Pinnacles may also be affected by inadvertent spills (oil, paint, chemicals, etc.), removal of shade, loss or alteration of organic material (leaves, logs, etc.) entering streams or increased turbidity from erosion due to trampling/removal of vegetation or construction of trails, road maintenance activities, etc.

Because the creeks within the monument originate outside of it, there would also continue to be impacts on water quality from sources outside the boundary. Sources within and outside of the monument would continue to produce localized minor to moderate impacts on water quality throughout the monument (see cumulative impacts).

The existing Chaparral parking area and other facilities, located within the floodplain, would continue to contribute to long-term, minor to moderate, adverse



Bear Gulch Reservoir. NPS photo.

effects to water quality from runoff. Similarly, the existing Moses Spring parking lot, located within a major drainage, would continue to produce minor to moderate adverse impacts.

WATER QUALITY – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Impacts on water quality from alternative B would be similar to those described under alternative A. Alternative B also includes the possibility of removing/reconfiguring the Moses Spring parking lot to restore hydrologic processes in Bear Creek. This would likely have long-term beneficial impacts on water quality. At Chaparral, the parking area and approach road would also be removed, allowing West Fork Chalone Creek to follow a more natural path and allowing for natural revegetation to occur, with expected beneficial impacts on water quality. As in alternative A, restoration in the bottomlands and along Sandy Creek would also have long-term beneficial effects.

The construction of new trails under alternative B could alter runoff from hillsides and increase erosion. Although mitigation measures would minimize these effects, it is likely that these trails would have negligible to minor long-term adverse effects, depending on their location. Additional site-specific environmental analysis would occur as plans for these are developed.

Construction would be designed to avoid impacts on water quality, with anticipated short-term minor adverse effects. In alternative B, this includes construction of a replacement East Pinnacles visitor center and entrance station. These structures would be built outside of the 100 year floodplain, would be constructed under current sustainability standards, and would be subject to future site-specific environmental analysis.

Removal of the existing campground swimming pool could have long-term minor adverse impacts on water quality in Sandy and Chalone creeks because visitors may seek an alternative water-based experience in and around Sandy Creek, a nearby natural source of water that could be degraded by additional recreational use. During hot summer days, visitors are drawn to water sources to cool off. If this recreational use occurs in Sandy or Chalone creeks, it would adversely affect water quality from the use of sunscreen, insect repellent, lotion, etc. entering the water, as well as from increased erosion due to trampling of stream bank vegetation. The portion of Sandy Creek within the campground is currently a high quality riparian habitat with perennial stream flow that supports many plant and animal species.

WATER QUALITY – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Many of the same impacts in alternative B would also occur in alternative C, with some exceptions. The Moses Spring parking area would not be removed in alternative C. Also, the size and location of the replacement east side visitor center and entrance station would be different. Some additional uses would be allowed in alternative C, including equestrian use and bicycling. Slightly more miles of new trail would be constructed.

Equestrian and bicycling on dirt roads can contribute to increased erosion, especially during the wet season when roads are muddy. These effects, however, would be largely mitigated by limiting use when wet conditions exist. Thus, only minor to moderate long-term adverse effects would occur from equestrian and bicycle use. Because of the limited areas available for equestrian use, it would likely be limited to relatively flat areas and/or away from streams, therefore adverse impacts on water quality from horse feces or trampling would be minor.

Although there would be more new trails than in alternative B, mitigation measures would be the same and impacts would remain negligible to minor and localized.

As in alternative B, new construction on the east side (visitor center and entrance station) would be designed to avoid contributing to water quality impacts. Because this alternative calls for a larger east side development footprint, there would likely be more hardened (impervious) surfaces. Overall impacts, however, would remain short-term and minor. Water quality degradation due to runoff would be mitigated by developing sediment control plans and implementing best management practices.

WATER QUALITY – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts from actions in alternative D would be the same as in alternative C with minor adverse impacts occurring from the construction of a replacement visitor center, and entrance station, as well as beneficial impacts from restoration of the same areas. Unlike alternative C, there would be an increased emphasis on education and interpretation that would focus on the monument in its broader regional context. This would have long-term beneficial impacts on water quality at Pinnacles by raising awareness of water quality issues, likely resulting in fewer adverse impacts.

WATER QUALITY – CUMULATIVE IMPACTS

Due to the generally steep terrain at Pinnacles, most development and activities occur in the relatively flat valley bottoms where they are most likely to impact water quality. Runoff from hardened and/or impervious surfaces, including buildings, roads, trails, parking lots, campgrounds, and picnic areas may adversely affect water quality, due to sedimentation, introduction of contaminants, and increases in water temperature. The existing hardened surfaces in Pinnacles would continue to contribute to minor to moderate localized cumulative adverse impacts throughout the developed corridors. Potential sources of water quality degradation also exist upstream of monument boundaries, with possible external sources including ranching and other agricultural activities. Minor to moderate adverse effects from alternative A when combined with these ongoing impacts would result in moderate overall cumulative impacts. Actions in alternatives B, C, and D would have minor adverse impacts with some localized beneficial impacts from restoration and redevelopment (moving facilities out of the floodplain). However, these restoration and redevelopment actions would not outweigh the effects of most existing impacts, resulting in overall moderate adverse impacts on water quality.

WATER QUALITY – CONCLUSION

Alternative A would continue to produce minor to moderate adverse impacts on water quality throughout the monument due to the continuing impacts of existing infrastructure and activities in and upstream of monument watersheds and streams, particularly the existing campground, Moses Spring parking, and Chaparral parking areas.

Alternative B would produce minor adverse impacts on water quality due to the new construction of trails, an entrance station, and a visitor center. Beneficial impacts include removal of the Moses Spring and Chaparral parking areas.

Adverse impacts from alternative C would be minor, from a higher level of hardened surfaces to support increases in visitor facilities.

Adverse impacts from alternative D would also be minor, similar to alternative C. Increased outreach efforts would provide additional beneficial effects.

Natural Sounds

The area of consideration for this topic is the monument. The impacts described here are generalized, due to a lack of specific data, and apply to both visitors and wildlife. More direct examples of soundscape impacts to wildlife are described in the Wildlife and Federally Listed Threatened and Endangered Species sections. Context, time, and intensity together determine the level of impact for an action or activity related to soundscapes. Noise for a certain period and intensity would be a greater impact in a highly sensitive context, and a given intensity would be a greater impact if it occurred more often, or for longer duration. For example, in very low-level ambient soundscapes, like the wilderness, noises can be much more audible, thereby having greater impact intensities. It is usually necessary to evaluate all three factors together to determine the level of noise impact.

Negligible: Noise would rarely be greater than natural ambient sound levels, and/or there would usually be lengthy periods each day between noise events. Noise in a specific area would rarely result in a value for any noise metric that is more than a very small increment above the value for natural ambient sounds in the same area. Natural sounds would predominate.

Minor: Noise would be greater than natural ambient sound levels for a small portion of the day, and/or there would often be substantial periods each day between noise events. Noise in a specific area would rarely result in a value for any noise metric that is more than a small increment above the value for natural ambient sounds in the same area.

Moderate: Noise would be greater than natural ambient sound levels for an intermediate portion of the day, and/or there would rarely be more than intermediate periods each day between noise events, or the noise would be due to a short-term facility construction project. Noise in a specific area would rarely result in a value for any noise metric that is more than an intermediate increment above the value for natural ambient sounds in the same area.

Major: Noise would be greater than natural ambient sound levels for a large portion of the day, and/or there would rarely be more than short periods each day between noise events. Noise in a specific area would often result in a value for a noise metric that is more than an intermediate increment above the value for natural ambient sounds in the same area.

NATURAL SOUNDS – IMPACTS FROM ALTERNATIVE A (NO ACTION)

The monument would continue to maintain existing facilities and roads with their associated sound levels. In developed zones, soundscapes would have minor to moderate, adverse impacts depending on increases or decreases in visitor use levels. During heavy visitor use periods, frequently used caves can be noisy, causing short-term, moderate, adverse impacts on soundscapes in the Bear Gulch and Balconies caves.

Large groups, including school groups, climbing groups, and other organized groups, sometimes adversely impact soundscapes on a short-term basis. In popular climbing areas, individuals often shout to communicate to fellow climbers. Park operations also contribute to soundscape impacts when machinery is used. Wilderness areas in many parts of the monument, particularly in the High Peaks area, are susceptible to unintentional operational and visitor use noise impacts because of their proximity to developed areas, their high levels of use, and the character of the rocky canyon landscape which carries sound from the lowlands up to the peaks. These adverse impacts would continue to be minor, with some minor to moderate localized impacts on peak days.

A South Wilderness Trail connection would be developed under this alternative. Due to its remoteness, this trail would likely receive little regular use. Therefore, adverse impacts on this previously rarely visited area would be negligible to minor. Short-term impacts associated with construction of this trail would also be negligible to minor, because the use of machinery would be limited by the minimum tool requirement.

NATURAL SOUNDS – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

New trails would be developed under this alternative, increasing the number of visitors in infrequently visited areas and creating short-term construction-related impacts. The actual construction of trails would have short-term, minor to moderate, adverse impacts. Because most (up to 10 miles) of the trail construction would occur in designated wilderness or areas zoned as primitive, construction impacts would be mitigated by the use of a minimum requirement / minimum tool analysis, as well as by time of day and time of year restrictions. Levels of visitor use on new trails would also be managed in accordance with primitive zone guidelines set to limit impacts on a variety of resources, including soundscapes, resulting in negligible to minor, long-term, adverse impacts on the monument's soundscape resources.

The new development or other ground-disturbing activities proposed in alternative B, including construction of an entrance station, and replacement of the east side visitor center, would have minor to moderate, short-term, adverse impacts on the monument's soundscape during construction, but would not increase long-term impacts because the development is located in areas currently used for visitor services.

Alternative B would have several beneficial impacts on soundscapes as a result of zoning more of the monument as "primitive" to protect wilderness character by managing overall levels of use. Large groups, in general, would not be encouraged and new facilities to accommodate them would not be built. The addition of new trails, a potential adverse effect, also would have beneficial effects from redistribution of use and dispersal of visitors away from heavily used areas. In addition, interpretation and education in the monument would be focused on wilderness values, including solitude and natural quiet. Visitors would learn the effects of their behavior on these values and behavioral change would be promoted.

NATURAL SOUNDS – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Trail access would be developed in several new areas, increasing the number of visitors in infrequently visited areas. The actual construction of trails would cause short-term, negligible, adverse impacts. Most of these trails would improve access to rarely visited areas like Mt. Defiance and McCabe Canyon, causing visitor use impacts, including noise, in relatively undisturbed areas. These new trails could disperse some visitors away from currently heavily used trails, providing some beneficial impacts throughout the monument, even as localized impacts increase in specific areas. Localized, adverse noise impacts would be minor on most of the new trails, because of their more remote locations. The proposed bottomlands, valley oak, and west side interpretive loop trails may experience the most use due to their ease of access. These trails could experience minor to moderate adverse impacts. The construction of new trails in alternative C would have similar negligible to minor, short-term, adverse impacts for trails located in wilderness areas as described under alternative B. Construction of new trails outside of wilderness could bring minor to moderate adverse impacts, depending on whether mechanized construction tools are used. The impacts of trail design and construction, along with alternatives, would be further analyzed through site-specific trail planning before any construction is undertaken.

Other new development or ground-disturbing activities in alternative C, including construction of a replacement entrance station and East Pinnacles

visitor center, a new west side walk-in campground, new backcountry campsites, new equestrian staging areas, campground reconfiguration, and the removal of the Chaparral parking area would have minor to moderate, short-term, adverse impacts on the monument's soundscape during installation. These facilities would also accommodate more visitor and vehicle use in the monument, potentially increasing noise levels in the campground area and causing minor to moderate localized, long-term, adverse impacts.

On the infrequently visited bottomlands, noise levels would increase with equestrian use, new operational uses at the Bacon House, and the new culturally immersive visitor experiences at the Butterfield homestead. These new uses, taken together, would have minor to moderate adverse impacts on natural soundscapes.

NATURAL SOUNDS – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts on natural quiet and soundscapes would be similar to those described for alternative C, except that long-term effects would be slightly less adverse in the bottomlands because equestrian facilities and access would not be provided.

NATURAL SOUNDS – CUMULATIVE IMPACTS

Soundscape levels associated with human activities outside of the monument vary depending on location within the monument. The main impacts are from high altitude commercial jets and general aviation traffic, agricultural activities on private lands, and vehicle noise from nearby roads. The sound of passing vehicles on Highway 25 can be heard from the bottomlands and adjacent canyons, including portions of the Ben Bacon Ranch Historic District, with minor to moderate adverse impacts. During several months of the year, vineyards use propane cannons to deter birds from feeding on grapes. These cannons produce a loud “bang” approximately twice per minute. Currently they can be heard on the extreme east side of the monument (portions of the Ben Bacon Ranch Historic District) and for the uppermost mile of the North Chalone Peak Trail and all of the South Chalone Peak Trail (primarily designated wilderness). Visitors to these areas experience moderate seasonal impacts on the natural soundscape. When the minor to moderate long-term adverse effects of the actions under alternatives A, B, C, and D are added to the effects of actions outside the monument, they would continue to result in a long-term, minor to moderate, adverse overall cumulative impact on the monument's soundscape.

NATURAL SOUNDS – CONCLUSION

New facility proposals, including trails, are conceptual in nature and illustrate the desired condition for visitor services and facilities in particular areas. All of the new construction described in the alternatives would require site-specific planning, siting, and design, including further environmental compliance.

Long-term adverse impacts under alternative A would be minor to moderate, due to ongoing impacts in developed areas, along trails, and in caves. Some negligible to minor short-term impacts would occur due to construction of the South Wilderness Trail connection.

Long-term impacts associated with monument operations and visitor use in alternative B would have a minor to moderate, adverse impact. Short-term adverse impacts due to construction of trails and facilities would be minor to moderate. Some beneficial effects would be realized from the interpretive programming focus on wilderness values.

Long-term impacts associated with monument operations and visitor use in alternatives C and D would have minor to moderate adverse impacts. In some specific areas with visitor facilities there would be short-term, minor to moderate adverse impacts from visitors, vehicles, construction, and maintenance.

Vegetation

The area of consideration for this topic is the monument. Available information on vegetation in the monument was compiled. Potential impacts from management actions are based on professional judgment and experience with similar actions. The thresholds of change for the intensity of an impact are as follows.

Negligible: Impacts on vegetation (individuals or communities) would not be measurable. There would be no detectable change in the native plant community. The abundance or distribution of individuals would not be affected or would be slightly affected. Local or regional populations and communities would not be affected.

Minor: Actions would affect the abundance or distribution of individuals in a localized area but would not affect the viability of local or regional populations or communities. The impact would be slight, but detectable. The overall native plant community would not be affected and, left alone, would recover.

Moderate: Actions would affect a local population sufficiently to cause a change in abundance, distribution, quantity, or quality, but would not affect the viability of the regional population or communities. The impact would be localized and restricted in size.

Major: The impact to the native plant community would be substantial, highly noticeable, and long-term. Actions could also affect a regional or local population of a species sufficiently to cause a change in abundance or in distribution to the extent that the population or communities would not be likely to return to its/their former level. Ecological processes would be altered.

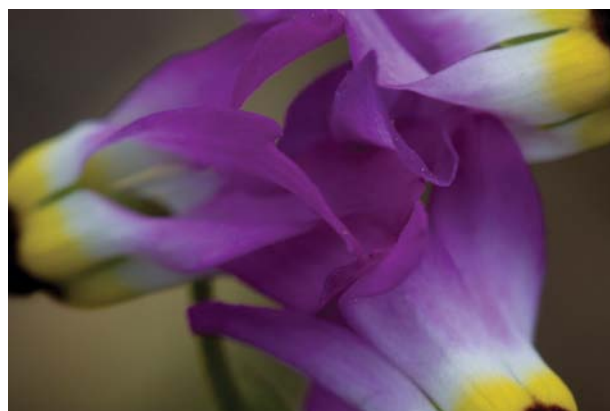
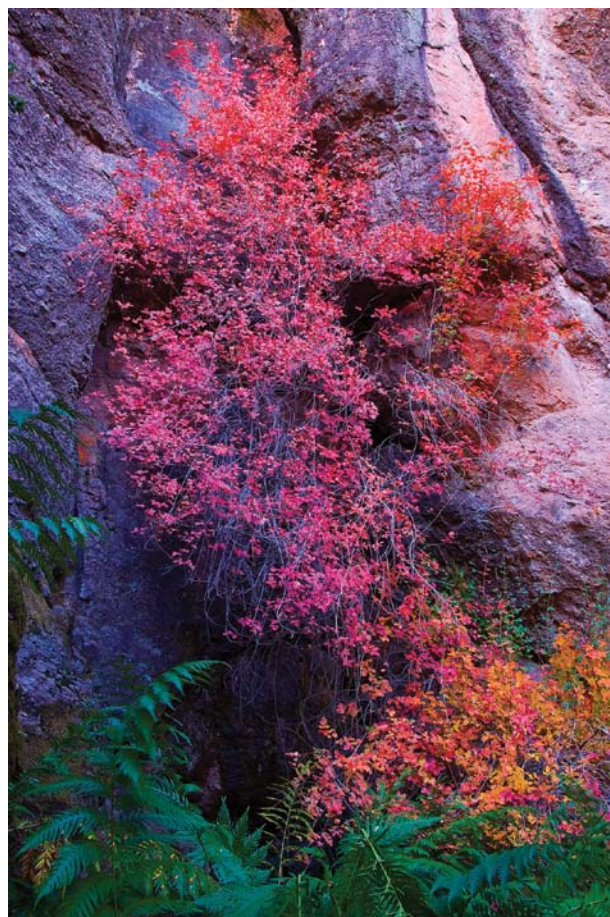
VEGETATION – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Ongoing vegetation impacts would include damage to or loss of native vegetation due to maintenance activities, minor modifications to developed areas, recreational use, including trampling and soil compaction, and the spread of non-native species. Among the actions in alternative A that would have adverse effects include actions related to development such as stabilization or rehabilitation of historic structures, trail maintenance and construction, recreational use, and nonnative invasive plant introduction. Ongoing treatment and restoration efforts would provide beneficial impacts.

Alternative A contains some planned small-scale development, including a new South Wilderness Trail connection and work on historic structures, which would likely result in the loss or disturbance of vegetation, providing ways for invasive species to establish, resulting in long-term, localized, negligible to minor adverse impacts. Shade structures in the Chaparral picnic area would have negligible to minor impacts on vegetation because of existing compaction and sparse plant growth on this already compacted site.

Reconfiguration of the campground to protect sensitive resources by removing campsites from the riparian corridor would have long-term beneficial impacts from restoration of native communities.

Some vegetation may be damaged or lost near popular use areas in the monument due to human created social trails. Although these impacts would be unlikely to affect the integrity, distribution, or presence of native plant communities in the monument, they would have localized effects and would encourage additional loss of vegetation over time as more people used the social trail. Overall, visitor use would likely continue to have a localized long-term minor adverse impact on the monument's native vegetation.



Photos (top to bottom): 1. Miner's lettuce. Photo by Debbie Delatour, Artist in Residence. 2. Poison oak shows its fall colors. Photo by Gavin Emmons © 2011. 3. Shooting stars. Photo by Debbie Delatour, Artist in Residence.

In addition to direct loss of vegetation through the creation of social trails or trampling, there would be localized, long-term, minor adverse impacts from current visitor use levels and from the potential for increased visitor use levels to impact native plant populations through the introduction and spread of nonnative invasive plants. Current nonnative invasive plant control, including selective treatment of nonnative invasive plants and prescribed fire would continue to result in long-term beneficial effects on native vegetation. Ongoing use of integrated pest management (IPM) measures would also continue to contain the spread of some nonnative invasive species in limited areas. Even with IPM and visitor education efforts, some nonnative invasive plants might be introduced or spread by visitors (as well as by wildlife and vehicles) in the monument.

Pockets of nonnative species would continue to be present in the monument and would potentially spread to new developed areas. It is difficult to determine the impact this would have on native species, due to uncertainties about the type of species that might be introduced and the locations and frequencies of such introductions. It is likely that even with continuing monitoring and weed control efforts the impacts would be long-term, adverse, and minor to moderate.

Long-term beneficial impacts would be realized from ongoing restoration efforts, including habitat areas in the bottomlands and McCabe Canyon. Some restoration is also planned for the west side where facilities are being replaced. Current efforts to eradicate nonnative species and replace them with native species on the bottomlands would continue.

VEGETATION – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

The monument's commitment to removing unnecessary structures and minimizing its development footprint would result in long-term beneficial impacts, because revegetation would follow construction activities. Alternative B would have a greater degree of restoration and would remove infrastructure from the primitive zone. This would result in long-term beneficial impacts by restoring native plant communities and populations in those areas.

Revegetation of the riparian area currently impacted by the Moses Spring parking area would have additional beneficial impacts by increasing the overall area of vegetation and eliminating impacts associated with road run-off in this area.

A replacement visitor center, replacing the current building in the same location and an entrance station would be provided in the vicinity of the campground.

Because these facilities would be concentrated in the already developed and disturbed campground area or along the road corridor, adverse impacts associated with these facilities would be negligible.

New trail access in little used areas could potentially provide new opportunities for the spread of invasive species. Adverse impacts could occur on the trail accessing the bottomlands and the adjacent hills to the east. This trail is likely to experience frequent use, because it connects directly to the visitor center and campground, and would traverse previously disturbed areas. Minor to moderate adverse impacts could result. Connections to the North Wilderness Trail through or above McCabe Canyon could also produce negligible to minor adverse impacts through the introduction of invasives in previously unimpacted areas.

VEGETATION – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Alternative C would have many of the same impacts as the other action alternatives, with additional adverse impacts from new equestrian use in the bottomlands. Although the monument would allow equestrian use only after high priority non-native invasive weeds have achieved control status, only on the bottomlands, and away from riparian areas, such use would likely bring in new non-native species from outside of the park. Best practices cannot provide absolute control of invasive species. Thus, equestrian use by visitors is likely to result in minor to moderate long-term adverse effects. Because, however, equestrian use would not occur in riparian areas, there would be fewer impacts.

In addition, facilities that accommodate equestrian use, such as trailer parking, watering troughs, and hitching posts have the potential to cause further damage. These facilities, however, would be limited to previously disturbed areas in the vicinity of the campground and bottomlands, keeping adverse impacts to minor levels.

A small number of backcountry campsites may be designated, leading to long-term negligible adverse effects from the small increase in disturbance to vegetation and potential associated spread of invasive species from increasing bare ground. On the west side, a new walk-in campground would likely bring moderate adverse impacts to that area for similar reasons.

The larger replacement visitor center on the east side could cause long-term minor adverse impacts due to its increased footprint. Existing infrastructure necessarily locates the visitor center in already disturbed areas, but the development footprint would be larger when parking is also added. Mitigation on this site would include native plant landscaping, revegetation, and early detection of nonnative plant populations.

New trails connecting the campground to the North Wilderness Trail and providing access to McCabe Canyon would be provided, creating increased vector opportunities for invasive species in this large area and minor to moderate adverse impacts. Likewise, other proposed trails in similarly unfrequented locations could potentially provide new opportunities for invasive species.

Because the focus of invasive plant control would be in visitor use areas, other areas may receive less attention, resulting in long-term minor to moderate adverse effects on native vegetation, due to the loss or alteration of native communities in some areas.

VEGETATION – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Alternative D would have the same impacts as alternative C, with several exceptions, listed below.

The focus of invasive plant control measures would not be as limited to high use areas as described in alternative C. Generally, invasive plant control under alternative D would be a beneficial impact on the monument's vegetation.

Equestrian uses would not occur under alternative D.

A greater emphasis on science and history learning would elevate visitor awareness of invasive species spread and could prompt behavior that mitigates some of the impacts of visitor use, resulting in beneficial effects.

VEGETATION – CUMULATIVE IMPACTS

Actions outside of the monument would likely continue to affect the area's native vegetation. Over time, many native plant communities have been affected by human activities such as agricultural operations, grazing, construction, and other development both within and outside of the monument, causing moderate, long-term, adverse impacts on native vegetation in the monument. Minor to moderate impacts from alternatives A-D would not add appreciably to these cumulative impacts because they would primarily occur in developed areas and would be small in comparison. Ongoing and proposed restoration efforts, however, would benefit some areas, resulting in overall minor to moderate adverse effects on native vegetation in the monument.

VEGETATION – CONCLUSION

Under alternative A, long-term, moderate, adverse impacts would occur in local areas due to visitor use, the continuing spread of weeds, and small-scale development. Current weed control efforts would continue to result in long-term beneficial effects in other areas.

Long-term, minor to moderate, adverse impacts would occur in local areas under alternative B, due to current visitor use levels and the introduction of visitors to new areas. An emphasis on restoration, however, would lessen this overall impact.

Alternative C would have moderate, long-term, adverse impacts on native vegetation, primarily from equestrian use, visitor use in remote areas and new infrastructure. Alternative D would have minor to moderate, long-term, adverse impacts on native vegetation, primarily from new visitor use in remote areas and new infrastructure. Regional issues with invasive species would continue to affect the monument, and added to the actions in this alternative, would result in minor to moderate adverse impacts on vegetation.

Viewsheds and Scenic Resources

The area of consideration for this topic is the monument. Potential impacts from management actions are based on professional judgment and experience with similar actions. Important viewsheds within the monument include those areas visible from the High Peaks, including the Chaparral area on the west side, and views near the two monument entrances. The thresholds of change for the intensity of an impact are as follows:

Negligible: The effects would be barely detectable and would not be expected to have a discernible effect on scenic/visual resources and viewsheds.

Minor: The effects would be slightly detectable, though would not be expected to have an overall effect on scenic/visual resources and viewsheds.

Moderate: The effects would be clearly detectable and could have an appreciable effect on scenic/visual resources and viewsheds.

Major: The effects would have substantial, highly noticeable influence and could permanently alter scenic/visual resources and viewsheds.

VIEWSHEDS AND SCENIC RESOURCES – IMPACTS FROM ALTERNATIVE A (NO ACTION)

In alternative A, no new developments are proposed that would impact scenic views within the monument.

Some existing structures and improvements within the monument, including roads and trails, are visible from backcountry and wilderness areas, the High Peaks, and monument entrances, and would continue to impact viewsheds within the monument with minor effects.

VIEWSHEDS AND SCENIC RESOURCES – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Under alternative B, much of the monument would be zoned primitive. This zoning would limit development, resulting in beneficial impacts. Negligible to minor adverse long-term impacts on viewsheds could occur with the construction of a replacement entrance station on the east side, depending on its exact location. Because the proposed small visitor center, would replace the existing visitor center in its current location, it would not add to viewshed impacts. Activities related to construction, maintenance, and rehabilitation of facilities would have minor to moderate, short-term visual impacts.

Additional trail access to new areas is proposed under alternative B. Because the trails would primarily fall within the primitive zone, they would be designed to be compatible with wilderness resources, and would therefore have negligible long-term adverse impacts on viewsheds.

Removal of the highly visible Chaparral parking area and road from the overflow lot turnoff to the parking area would benefit viewsheds from the western side of the High Peaks.

VIEWSHEDS AND SCENIC RESOURCES – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Negligible to minor impacts associated with new trails and a new entrance station, minor to moderate short-term impacts associated with construction, maintenance, and rehabilitation, and beneficial impacts from the removal of the Chaparral parking area would be the same as in alternative B.

In addition, the construction of a replacement visitor center, picnic area, equestrian staging areas, and the additional parking to serve these facilities could have varying effects on views from the High Peaks or east entrance, depending on location. Although these facilities would be located in the vicinity of the existing

developed campground area, they could slightly increase the development footprint or slightly increase the facilities visible from some trails, resulting in long-term negligible to minor impacts.

VIEWSHEDS AND SCENIC RESOURCES – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts under alternative D would be the same as those under alternative C, but with slightly fewer potential impacts due to the lack of equestrian facilities on the bottomlands.

VIEWSHEDS AND SCENIC RESOURCES – CUMULATIVE IMPACTS

Several communities and homes outside of the monument, along with many agricultural facilities, fields, and vineyards can be seen from various areas within the monument, including the High Peaks, the east entrance, and backcountry areas. Potential future development outside of the monument could affect visual resources by altering scenic landscapes. As both San Benito and Monterey counties continue to grow in population, further impacts are foreseeable. These adverse impacts are currently minor but are reasonably foreseeable to become moderate in intensity. The negligible to minor long-term adverse effects in alternative A combined with these cumulative impacts would result in overall minor to moderate impacts. The beneficial and negligible to minor adverse effects of the action alternatives combined with cumulative impacts would also range from minor to moderate in overall impacts.

VIEWSHEDS AND SCENIC RESOURCES – CONCLUSION

Alternative A would have negligible to minor, long-term, adverse impacts on visual resources, primarily from visible infrastructure both within and outside of the monument.

Under alternative B, primitive zoning in many areas of the monument would limit development, resulting in beneficial impacts. Overall impacts from additional development and infrastructure would be negligible to minor. Alternatives C and D would also have negligible to minor long-term adverse impacts on scenic resources, primarily from development.

Minor to moderate short-term impacts would occur due to construction, maintenance, and rehabilitation projects under all alternatives.

Wildlife and Wildlife Habitat

The area of consideration for this topic is the region. Impacts on wildlife are closely related to impacts on habitat. The evaluation considered whether actions would be likely to displace some or all individuals of a species in the park or would result in loss or creation of habitat conditions needed for the viability of local

or regional populations. Available information on wildlife and wildlife populations was analyzed. Focal species include rare and endemic species, Species of Special Concern, migratory birds, and all other wildlife species other than those listed as federally threatened or endangered. Predictions about short- and long-term impacts were based on previous studies of impacts on natural resources and recent monitoring data from the park. The thresholds of change for the intensity of an impact are as follows.

Negligible: Effects on wildlife would be at or below the level of detection, would be short term, and the changes would be so slight that they would not be of any measurable or perceptible consequence to the species' population.

Minor: Effects on wildlife would be detectable, but localized, small, and of little consequence to the species' population.

Moderate: Effects on wildlife would be readily detectable but localized, with consequences at the population level.

Major: Effects on wildlife would be obvious and would result in substantial consequences to the wildlife populations at the regional level. The change would result in a severe adverse or major beneficial impact, and possible permanent consequence on the species' extent in the monument.

WILDLIFE AND WILDLIFE HABITAT – IMPACTS FROM ALTERNATIVE A (NO ACTION)

In this alternative, existing natural resource management activities would continue. Management decisions would continue to be science-based, including results presented in peer-reviewed journals and from monitoring programs focusing on raptors, exotic pigs, and bats in the caves. Removal of nonnative invasive species and restoration of degraded areas such as in the bottomlands would also continue, resulting in long-term beneficial effects on wildlife species through habitat improvement.

New construction, such as the South Wilderness Trail connection and shade structures at the Chaparral picnic area would have negligible short- and long-term adverse impacts on wildlife and wildlife habitat, primarily from noise and activity associated with construction as well as from use of the trail corridor when complete.

Provision of wireless internet services may have an unknown level of adverse impact on species. The biological effects of EMF radiation from devices such as wireless internet transmitters are unknown, but some evidence suggests it may be biologically harmful.

WILDLIFE AND WILDLIFE HABITAT – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCE)

Under this alternative, limitations on intrusive research and monitoring methods could result in minor long-term adverse impacts due to reduced staff and public awareness of trends and conditions related to habitat.

Removal of the swimming pool is likely to increase recreational use of streams which may disturb frogs, damage habitat, and introduce chemicals into the aquatic system, resulting in minor long-term adverse impacts.

Long-term beneficial impacts would be expected from removal/reconfiguration of the Moses Spring parking area and removal of the Chaparral parking area, due to improved stream function, riparian habitat, and habitat connectivity. A greater emphasis on detection and prevention of invasive species throughout the monument, as well as increased restoration efforts in the bottomlands and riparian areas along Sandy Creek, would also result in long-term beneficial effects.

The emphasis of this alternative on dispersing visitor use would likely have mixed effects. New trails would bring people into areas previously visited only rarely by humans, potentially increasing wildlife disturbance and habitat degradation in those areas. But visitor use of existing trails would presumably decrease, lessening such effects there. The possible institution of group size limits might also benefit wildlife, although the resulting lower intensity but more constant human presence might cause comparable levels of disturbance to wildlife. New trails have the potential to spread invasive plants to new areas of the monument, with long-term negligible to minor adverse impacts on wildlife due to habitat loss or alteration, but ongoing invasive control efforts will reduce the adverse impacts.

WILDLIFE AND WILDLIFE HABITAT – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Under Alternative C, the monument would emphasize serving multiple audiences through a wide variety of media and programming, increasing opportunities for visitor involvement in conservation and understanding of wildlife issues. This higher level of engagement would increase visitor and public support, understanding, and cooperation, resulting in potential long-term beneficial impacts for all species.

Adaptive re-use of the Bacon Barn and replacement of the visitor center with a larger structure would increase noise and human presence in those areas.

More of the monument (especially the riparian and valley oak woodlands which are critical for wildlife) will be zoned to as “semi-primitive” and “frontcountry” and a greater variety of group sizes and visitor activities will be encouraged. Together, these actions are expected to result in long-term minor to moderate adverse wildlife impacts.

Equestrian use and backcountry camping have the potential to adversely impact wildlife. The provision that these will only be allowed if they do not detract from resource values is intended to minimize such impacts.

Bicycle use will introduce novel noise pollution and fast-moving objects, likely resulting in minor long-term adverse impacts on wildlife through disturbance.

Impacts from new hiking trails are expected to be similar to those in alternative B.

The new west side walk-in campground is expected to have localized minor long-term adverse effects on wildlife and wildlife habitat, in part because it will increase human presence at night where currently there is very little use.

Because the focus of invasive plant control would be in visitor use areas, other areas may receive less attention, resulting in long-term minor adverse effects on wildlife, due to the loss or alteration of native habitat in some areas.

WILDLIFE AND WILDLIFE HABITAT – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

This alternative’s strong emphasis on natural resource stewardship and ecological restoration throughout the monument would result in long-term beneficial impacts on wildlife.

Alternative D is otherwise expected to have similar impacts on wildlife and wildlife habitat as alternative C, with the exception of those related to equestrian use, which is not included in this alternative, and invasive plant control measures, which will be applied to more areas of the monument.

WILDLIFE AND WILDLIFE HABITAT – CUMULATIVE IMPACTS

Over time, the conversion of some of the lands surrounding the monument to intense agricultural and housing developments has resulted in the loss of wildlife and wildlife habitat. Combined with the purposeful eradication of predators throughout the early part of the twentieth century, this has resulted in reduced populations or extirpation of some species. Ongoing efforts to control “varmints” on neighboring

lands may upset the natural predator-prey relationships in the area, and may also result in taking or poisoning of wildlife species that move across monument boundaries. With ongoing changes to nearby private lands, a wide range of long-term adverse impacts on wildlife is possible, especially through habitat loss. However, some activities on neighboring lands have resulted in long-term beneficial impacts on wildlife and wildlife habitat. For example, artificial stock ponds provide habitat for aquatic species that may have inhabited backwaters of the Salinas River, a habitat that has largely disappeared.

Some ongoing NPS activities have never been thoroughly analyzed and may not be addressed elsewhere in this document because they are common to all alternatives, yet they may contribute to impacts on wildlife and wildlife habitat. The visitor shuttle has changed the distribution and numbers of visitors on trails in the core of the monument. Whereas visitor use of these trails was historically regulated by the size of nearby parking lots which filled up quickly on busy days, the shuttle now delivers people to trailheads in waves throughout the day, resulting in increased human disturbance to wildlife. Management has focused on how to maximize the number of visitors served by the shuttle, rather than mitigating its effects on resources.

Most of the monument’s parking lots, picnic areas, and buildings and many of the roads and trails are located in riparian and valley oak woodland habitat. These areas are flat and shady, making them desirable to humans and easy locations for construction. The Moses Spring Parking lot, Pinnacles Campground, and



Turkey vultures on the High Peaks. NPS photo.

Bear Gulch area adversely impact wildlife by altering habitat and stream hydrology and disturbing natural wildlife behavior and movements. Noise and light pollution and trimming/removal of trees for human safety lower the quality of wildlife habitat in these portions of the park's limited riparian and valley oak woodland habitat. This directly and indirectly impacts a wide variety of wildlife species including nesting raptors and other birds, aquatic and terrestrial amphibians and invertebrates, and large mammals and other animals that visit streams to drink. Plans to remove/reconfigure the Moses Spring parking lot and reconfigure the campground to protect sensitive riparian areas, if implemented, would reduce, but not eliminate these minor to moderate, adverse impacts. When proposed actions are evaluated in the context of the limited extent of these habitats and existing developments, the importance of their adverse impacts is magnified.

All alternatives would have minor beneficial impacts from research, interpretation, and restoration efforts, with slightly higher beneficial impacts from restoration of the Moses Spring parking lot in alternative B and Chaparral parking lot in alternatives B and D and from increased visitor education and engagement in alternatives C and D. When the likely minor to moderate effects of alternatives A-D are added to these beneficial impacts and the minor to moderate cumulative impacts described above, there would continue to be long-term minor to moderate overall cumulative adverse impacts on wildlife.

WILDLIFE AND WILDLIFE HABITAT – CONCLUSION

Alternative A would have minor to moderate adverse impacts on wildlife and wildlife habitat from new and existing developments and the visitor shuttle. Minor beneficial impacts would result from the continuation of research, interpretation, and restoration efforts.

Alternative B would have moderate adverse impacts due to a decrease in research, the removal of the swimming pool, and new hiking trails. Minor to moderate beneficial impacts would arise from restoration of the Moses Spring and Chaparral parking lots and the greater emphasis on controlling invasive species throughout the monument.

Alternative C would have minor to moderate adverse impacts due to a shift of focus for invasive plant control from park-wide to visitor use areas, in addition to impacts from equestrian and bicycle use, backcountry camping, the shuttle, existing developments, and new developments focused in riparian and valley oak woodland habitat. Minor to moderate beneficial impacts would result from an increased emphasis on interpretation and engaging the public in stewardship activities.



California red-legged frog eggs. Photo by Paul G. Johnson

Adverse impacts from alternative D would be similar to impacts from alternative C, minus those related to equestrian use and a narrower focus on invasive plant control. Beneficial impacts would also be similar to those of alternative C, with additional benefits to wildlife and wildlife habitat from increased visitor and citizen engagement in wildlife and habitat issues along with greater restoration efforts focused on areas with the greatest ecological benefit.

Federally Listed Threatened and Endangered Species

The area of consideration for this topic is suitable and known occupied habitat in the monument. Information on federally listed Threatened and Endangered species was gathered from responsible agencies, research, and specialists. Known locations of habitat associated with these species were compared with locations of proposed development and facilities, and modifications of existing facilities. Effects on other sensitive wildlife species (State Species of Special Concern, rare/endemic species, etc.) are addressed in the Wildlife and Wildlife Habitat section, as these species are so numerous and varied that impacts on them closely mirror impacts on wildlife in general.

In accordance with language used to determine effects on Threatened and Endangered species under the

federal Endangered Species Act (ESA) potential effects are categorized as follows (USFWS 1998):

No Effect: The project (or action) is located outside suitable habitat and there would be no disturbance or other direct or indirect impacts on the species. The action would not affect the listed species or its designated critical habitat (USFWS 1998).

May Affect, Not Likely to Adversely Affect: The project (or action) occurs in suitable habitat or results in indirect impacts on the species, but the effect on the species is likely to be entirely beneficial, discountable, or insignificant. The action may pose effects on listed species or designated critical habitat but given circumstances or mitigation conditions, the effects may be discounted, insignificant, or completely beneficial. Insignificant effects would not result in take. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not 1) be able to meaningfully measure, detect, or evaluate insignificant effects or 2) expect discountable effects to occur (USFWS 1998).

May Affect, Likely to Adversely Affect: The project (or action) would have an adverse effect on a listed species as a result of direct, indirect, interrelated, or interdependent actions. An adverse effect on a listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions and the effect is not discountable, insignificant, or beneficial (USFWS 1998).

Is likely to jeopardize proposed species / adversely modify proposed critical habitat: This is the appropriate conclusion when the National Park Service or the U.S. Fish and Wildlife Service identifies situations in which an action could jeopardize the continued existence of a proposed species or adversely modify critical habitat for a species within or outside park boundary.

The thresholds of change for the intensity of an impact are defined as follows.

Negligible: The action would have no measurable effect to a listed species, suitable, potential, or critical habitat, resulting in a “no effect” determination.

Minor: The action would be discountable (extremely unlikely to occur) or insignificant (not able to be meaningfully measured, detected, or evaluated) and would result in a “may affect, but not likely to adversely affect” determination. It would require informal consultation with the U.S. Fish and Wildlife Service.

Moderate: An action that would result in an insignificant change to a population or individuals of a species or designated critical habitat. Any change would be small

and localized and of little consequence, and would most likely result in a “may affect, and is likely to adversely affect” determination. It would require formal consultation with the U.S. Fish and Wildlife Service.

Major: An action that would result in a noticeable change to a population or individuals of a species or designated critical habitat. Any adverse effect to the species that may occur as a direct or indirect result of the alternative and the effect is not discountable, insignificant, or completely beneficial. Incidental take is anticipated to occur as a result of the action. The change would result in a “may affect, and is likely to adversely affect” determination and would require formal consultation with the U.S. Fish and Wildlife Service.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES – IMPACTS FROM ALTERNATIVE A (NO ACTION)

One federally listed Endangered species, the California condor (*Gymnogyps californicus*), and two federally listed Threatened species, the California red-legged frog (*Rana aurora draytonii*) and California tiger salamander (*Ambystoma californiense*), are found in Pinnacles National Monument. In this alternative, existing natural resource management activities would continue, including raptor monitoring, reestablishment of the California condor, control of exotic species, and restoration efforts in the bottomlands and other degraded areas. These activities would result in long-term beneficial effects on all three listed species.

There would be a continuing minor to moderate long-term adverse impact to California red-legged frogs at the Moses Spring parking lot. Its use and its hardened surface disrupt the movement of frogs up and down this important corridor, and it may have been built on the site of a breeding pond. Frogs’ behavior may be disturbed by cars and people, and frogs may be killed when they venture onto roads. The alteration to stream hydrology caused by the presence of the parking lot is likely causing adverse impacts on downstream habitat. The location of the campground along prime perennial stream habitat in the monument would continue to have minor to moderate effects on California red-legged frogs. This is primarily due to high levels of human presence, with associated noise and light pollution, and the inadvertent feeding of raccoons which may then prey on frogs. An unstudied possibility which has been documented elsewhere is that chemicals such as pharmaceuticals may enter groundwater from septic systems and end up in streams, potentially affecting frogs. Leach fields in the campground and elsewhere in the monument are located adjacent to streams. Similar effects to all of the above may occur due to the presence of roads, parking lots, and Park Headquarters in the Bear Gulch area.

New construction, such as the South Wilderness Trail connection and shade structures at the Chaparral picnic area would have negligible adverse impacts on listed species and their habitat. The new trail would bring a small number of additional visitors into areas that are currently rarely visited, but would not impact critical habitat. The trail would have no measurable effect to a listed species, suitable, potential, or critical habitat, resulting in a “no effect” determination

Provision of wireless internet services in the campground area may have an unknown level of adverse impact on listed species. The biological effects of electromagnetic radiation (EMF), from devices such as wireless internet transmitters, are unknown, but some evidence suggests it may be harmful. Because the effects cannot at this time be meaningfully measured, detected, or evaluated, these adverse impacts are considered to be negligible and would result in a “no effect” determination under the ESA for all listed species.

Continuation of the California condor reestablishment program would have beneficial effects on the recovery of this listed species. Currently, the monument manages 32 free-flying condors, monitoring each bird and providing health checks after its wild release from captive breeding efforts to increase its chance of survival. The monument works with academia and other technical experts to inform and direct restoration efforts. Other partners in condor recovery include the Amah Mutsun Tribal Band and other California Indian tribes to acknowledge, incorporate and perpetuate the cultural importance of the condor.

Successful recovery of the California condor is jeopardized by fatalities and compromised health caused by lead exposures. The leading anthropogenic cause of death and debilitation of California condors is lead toxicity. The primary source of lead exposures among condors is from ammunition sources inadvertently ingested from animal carcasses. Pinnacles National Monument works with partners across the nation to disseminate information on lead impacts on wildlife and viable non-lead ammunition alternatives. The Special Research zone would continue to remain closed under all alternatives. Alternative A would not have a measurable adverse effect to California condors or their habitat, resulting in a “no effect” determination.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCE)

Removal of the swimming pool could indirectly increase visitor use of California red-legged frog stream habitat, disturbing frogs, damaging habitat, and introducing chemicals into the aquatic system, resulting

in localized adverse impacts. Reconfiguring the campground, however, to protect sensitive resources, would benefit red-legged frog habitat. Monitoring of the riparian zone, as described in the *User Capacity* section, would further mitigate adverse impacts. Impacts due to removal of the swimming pool on California red-legged frogs would be long-term and minor, resulting in a determination of “may affect, likely to adversely affect” determination under the ESA.

Although short-term impacts could be minor and adverse, long-term beneficial impacts would result from removal of the Moses Spring parking area, due to improved habitat and habitat connectivity for California red-legged frogs. This action, coupled with a greater emphasis on detection and prevention of invasive species throughout the monument, as well as increased restoration efforts in the bottomlands and riparian areas along Sandy Creek, would likely result in long-term beneficial effects for all three listed species.

Other actions proposed in this alternative, including the replacement of the entrance station and the East Pinnacles visitor center, and the proposed new trails would require further environmental analysis to ensure that effects are minimized. With mitigation, impacts on California red-legged frogs would be minor to moderate due to the direct and indirect effects of facility placement in and near riparian habitat (see *Common to All Alternatives*), resulting in a “may affect, likely to adversely affect” determination. These actions would not meaningfully affect the other listed species.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Many of the same actions in alternative A, such as the condor recovery program, would continue and would have similar effects. Restoration of additional areas in the bottomlands would also occur, to a lesser degree than in alternative B, and would also have beneficial impacts. The monument would emphasize serving multiple audiences through a wide variety of media and programming, increasing opportunities for visitor involvement in conservation and understanding of wildlife issues. This higher level of engagement would likely increase visitor and public support, understanding, and cooperation with resource protection measures, potentially resulting in long-term beneficial impacts for all listed species.

Under alternative C, more of the monument would be zoned frontcountry, but future development would be sited and designed to minimize or prevent impacts on listed species (see *Common to All Alternatives* and *Mitigation Measures for the Action Alternatives*). With mitigation, new development proposed in alternative

C, including the entrance station, the replacement East Pinnacles visitor center, backcountry campsites, equestrian amenities, the west side walk-in campground, and the proposed new trails, would not likely affect California condors or California tiger salamanders. Impacts on California red-legged frogs would be minor to moderate due to the direct and indirect effects of facility placement in and near riparian habitat, resulting in a “may affect, likely to adversely affect” determination. As in the other action alternatives, these projects would require further environmental analysis.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts under alternative D would be the same as those described for alternative C, with some additional beneficial effects from more widespread restoration and a stronger emphasis on resource stewardship, and fewer adverse impacts due to the prohibition of equestrian use in the monument.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES – CUMULATIVE IMPACTS

Over time, impacts from loss of habitat, modifications to that habitat and direct loss of individual animals have resulted in species being listed or considered for listing under the Endangered Species Act. Near the monument, if development of adjacent private lands occurred it could have a wide range of long-term adverse impacts on California tiger salamanders, California red-legged frogs and California condors through habitat loss, wildlife control, and trespass livestock. However, current nearby uses which maintain an open landscape, including cattle ranching and hunting, can be compatible with protection of these species.

Cumulative effects on California tiger salamanders in the region have been minor to moderate and adverse, with the greatest threats being habitat loss and hybridization with non-native tiger salamanders. None of the alternatives are likely to affect California tiger salamanders, resulting in overall minor to moderate adverse impacts when combined with cumulative impacts.

Past effects related to California red-legged frogs have been major, with the species having been entirely extirpated from its regional stronghold, the Salinas River. The monument now supports one of the few remaining populations in the region. Habitat loss (due to agriculture and development), non-native species introduction (bullfrogs), and urban encroachment have all adversely affected the California red-legged frog throughout its historic range. Ongoing causes of decline include direct habitat loss due to stream alteration and disturbance to

wetland areas, indirect effects of expanding urbanization, and competition or predation from non-native species. The adverse effects of proposed actions in alternatives A, B, C or D, mixed with the beneficial effects of riparian restoration efforts and visitor education, would be minor to moderate. These minor to moderate adverse impacts do not appreciably add to the major cumulative effects described above; and the continued beneficial effect of visitor education can reduce this overall cumulative impact.

Past adverse effects related to California condors have been major, but the California Condor Recovery Program has brought the species back from the brink of extinction through conservation breeding programs and reintroductions, a continuing beneficial effect. Continuation of the condor reestablishment program at Pinnacles and public education efforts regarding the adverse effects on condors caused by the use of lead ammunition would continue under all alternatives, providing beneficial effects. None of the proposed actions would adversely affect condors. Overall cumulative effects on California condors would be beneficial.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES – CONCLUSION

New facility proposals, including trails, are conceptual in nature and illustrate the desired condition for visitor services and facilities in particular areas. New construction described in the alternatives would require site-specific planning, siting, and design, including further environmental analysis.

Alternative A would continue to have moderate adverse impacts on the monument’s federally-listed threatened and endangered species from monument operations and visitor use. In alternative B, adverse impacts would be minor.

Impacts on listed species from alternatives C and D would likely be mixed. Future environmental analysis on proposed development would minimize effects on listed species, but the presence of existing developments in and near riparian habitat, and plans to locate new development there as well, will adversely impact California red-legged frogs both directly and indirectly. Increased education efforts on wildlife issues would benefit special status species by changing visitor and community behavior affecting those species. The emphasis in alternative D on enhanced restoration efforts and encouragement of visitor participation in park stewardship would provide additional benefits.

Cultural Resources

Cultural Resources Listed, or Eligible to be Listed in the National Register of Historic Places

Potential impacts on those resources listed or eligible for listing on the National Register of Historic Places (NRHP) were identified and evaluated. The categories considered include archeological resources, cultural landscapes and historic buildings and structures. Evaluation was completed in accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800, Protection of Historic Properties). This evaluation was done by (1) determining the area of potential effect; (2) identifying cultural resources in the area of potential effect that are listed in or eligible for listing in the National Register; (3) applying the criteria of adverse effect to affected resources; and (4) considering ways to avoid, minimize or mitigate adverse effects. Information used in this assessment was obtained from relevant literature and documentation, maps, and consultation with cultural resource professionals, as well as from interdisciplinary team meetings, field trips, and site visits.

Under the regulations of the Advisory Council on Historic Preservation, a determination of adverse effect or no adverse effect must be made for affected National Register-listed or National Register-eligible cultural resources. The following definitions are provided:

No effect: There are no historic properties in the Area of Potential Effect (APE); or, there are historic properties in the APE, but the undertaking would have no impact on them.

No adverse effect: There would be an effect on the historic property by the undertaking, but the effect does not meet the criteria in 36 CFR Part 800.5(a)(1) and would not alter characteristics that make it eligible for listing on the National Register. The undertaking is modified or conditions are imposed to avoid or minimize adverse effects. This category of effects is encumbered with effects that may be considered beneficial under NEPA, such as restoration, stabilization, rehabilitation, and preservation projects. Undertakings determined to have no adverse effect by a qualified cultural resource manager can be documented under the streamlined process of the 2008 Programmatic Agreement.

Adverse effect: The undertaking would alter, directly or indirectly, the characteristics of the property making it eligible for listing on the National Register. An adverse

effect may be resolved by developing a memorandum of agreement in consultation with the SHPO, ACHP, tribes, other consulting parties, and the public to avoid, minimize, or mitigate the adverse effects (36 CFR Part 800.6(a)).

The thresholds of change for the intensity of an impact are defined as follows.

Negligible: The effects on cultural resources would be at the lowest levels of detection, barely measurable without any perceptible consequences, either beneficial or adverse to cultural landscape resources, historic buildings or structures, ethnographic, or archeological resources. For the purposes of Section 106 of the National Historic Preservation Act, the determination of effect would be *no effect*.

Minor: The effects on cultural resources would be perceptible or measurable, but would be slight and localized within a relatively small area. The action would not affect the character or diminish the character-defining features of a National Register-eligible or listed cultural landscape, historic structure, or archeological site, and it would not have a permanent effect on the integrity of any such resources. For the purposes of Section 106 of the National Historic Preservation Act, the determination of effect would be *no adverse effect*.

Moderate: The effects would be perceptible and measurable. The action would change one or more character-defining features of a cultural resource, but would not diminish the integrity of the resource to the extent that its NRHP eligibility would be lost. For the purposes of Section 106 of the National Historic Preservation Act, the cultural resources' NRHP eligibility would be threatened and the determination of effect would be *no adverse effect* or *adverse effect*.

Major: The effects on cultural resources would be substantial, discernible, measurable, and permanent. For NRHP eligible or listed cultural landscapes, historic structures, or archeological sites, the action would change one or more character-defining features, diminishing the integrity of the resource to the extent that it would no longer be eligible for listing in the National Register. For purposes of Section 106, national register eligibility would be lost and the determination of effect would be *adverse effect*.

All preservation, restoration, and rehabilitation treatments proposed under all of the alternatives would be in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.



Archeology

ARCHEOLOGY – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Under alternative A, the regional office and staff from other NPS units would continue to support monument staff in performing site condition assessments and archeological surveys. This work would contribute to long-term preservation and enhanced understanding of archeological resources and human use in the monument, resulting in beneficial impacts. Less than a quarter of the monument, however, has been surveyed for archeological resources to date. New surveys would continue to be done only in response to specific actions which trigger Section 106 (NHPA) compliance. Ongoing assessment of known and recorded sites would continue to meet legal requirements by regional office staff as time permits, but the backlog of condition assessment documentation would continue to grow.

Resources adjacent to or easily accessible from trails or day-use areas would continue to be vulnerable to surface disturbance, inadvertent damage, and

vandalism. Loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result in loss of site integrity. Some beneficial impacts would be realized under alternative A, including baseline documentation for two proposed west side historic archeological districts, as funding becomes available, continuing archeological site monitoring by law enforcement rangers, and the increased involvement of traditionally associated peoples in the research and protection of cultural resources. The latter action would help to identify and provide local site stewards for archeological resources who could assist with monitoring, particularly of locations infrequently visited by park staff. Both actions, however, would continue to be limited by the availability of staff or volunteers to implement them.

Known archeological resources would be avoided to the greatest extent possible whenever ground disturbing activities such as road and trail maintenance or construction of new facilities was needed. Archeological surveys would precede any ground disturbance for construction or removal of facilities,

as required by the mitigation identified in this plan. If National Register-eligible or listed archeological resources could not be avoided, impacts on such resources could be minor to moderate and adverse with mitigation. As additional detailed plans and APEs for each undertaking are developed, the monument would ensure that archeological resources would be minimally affected by surveying the proposed sites and monitoring actions so that inadvertent discovery of subsurface resources does not occur.

Installation of shade structures at the Chaparral picnic area has the potential to affect known archeological resources. Therefore, mitigation measures requiring monitoring of excavation would be employed to avoid adverse impacts. If archeological resources were found, the shade structures would be moved to an area where no impacts would occur or they would not be constructed. Given these mitigation measures and the fact the project would occur in an already highly disturbed area, this action has the potential for a negligible to minor impact, resulting in a determination of “no adverse effect” under Section 106.

ARCHEOLOGY – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Actions and impacts in alternative B would be similar to alternative A. In addition, alternative B would include development of a cultural resources program, the construction of more new trails and other facilities that could affect archeological resources. As in alternative A, however, the new facilities and trails would be designed and constructed in concert with the mitigation measures identified in this plan. Surveys would precede action and known archeological resources would be avoided. If previously unidentified archeological resources are later found, actions would be taken to alter the location or alignment of these to avoid impacts.

The addition of a full-time cultural resource specialist (program manager) position would allow the monument to initiate and manage a viable cultural resources program and ensure opportunities to undertake projects necessary to document and protect the monument’s resources. On-site staffing would facilitate prioritization of work and result in greater efficiencies and savings. Resources would benefit directly from the ability of local staff to provide closer, more frequent attention, and from a stronger feeling of stewardship which results from an on-site presence. This program would provide the monument with the capacity to conduct proactive field surveys and baseline documentation of the remaining unsurveyed lands within the monument. It would also allow the monument to make regular and timely condition assessments of previously recorded sites.

Several new trails would be built under this alternative, increasing visitation to previously remote areas. These trails would be sited and designed with the mitigation measures identified in this plan, including surveys in previously undisturbed areas. The siting and design of these trails would be subject to further environmental review to ensure impacts are avoided on a site-specific basis. Monitoring through the new cultural resource program would also mitigate potential disturbance to known archeological sites along these routes in the future, although the potential for minor to moderate adverse impacts on unknown resources would continue to exist.

Replacement of the visitor center and construction of the east side entrance station under alternative B would avoid adverse impacts, because these new facilities would be limited to existing developed footprints, where no archeological resources are known to occur.

ARCHEOLOGY – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Similar to alternative B, the addition of a full-time cultural resource specialist (program manager position) would allow the monument to initiate and manage a viable cultural resources program and ensure continued opportunities to undertake projects necessary to document and protect the monument’s resources.

Impacts due to trail construction and use would be the same as described under alternative B, except that there would be more new trails. The concentration of visitors in these newly opened areas may result in additional discovery and/or degradation of undocumented archeological resources. Some mitigation, however, would be provided through the beneficial impact of visitor education and cultural resource program monitoring. Construction activities associated with alternative C, including the East Pinnacles visitor center, an east side entrance station, equestrian amenities, backcountry campsites, shuttle stop improvements, picnic structures, and parking, would have a greater potential for adverse impact than alternatives A or B. With mitigation measures, these actions would likely result in minor, localized adverse impacts, resulting in a determination of no effect or no adverse effect under Section 106. The potential for a moderate adverse impact, resulting in a determination of adverse effect under Section 106, from the development of a walk-in campground on the west side would be avoided by carefully siting the campground facilities away from known archeological resources.

ARCHEOLOGY – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts on archeological resources under alternative D would be essentially the same as alternative C, with the exception that alternative D includes slightly less disturbance potential due to construction of facilities. As in alternative C, the addition of cultural resource program and interpretive staff would provide numerous overall benefits. Similarly, potential adverse impacts from a walk-in campground on the west side, new trails, and other proposed construction activities, as described under the analysis for alternative C, could be minor to moderate depending on the ability of the new program to adequately mitigate those impacts and the site planning and review process.

ARCHEOLOGY – CUMULATIVE IMPACTS

An expected increase in visitation, along with the change in dispersal of visitors due to recent west side development, has the potential for minor to moderate adverse impacts on proposed historic archeological districts due to direct and indirect visitor damage to known and unknown sites and features. These impacts may be partially mitigated by the recent increase in staff presence on the west side which will provide greater capacity for monitoring of the resources, law enforcement, and visitor education.

Over the years, visitors have caused direct damage to known sites throughout the monument. Indirect damage by visitors is more difficult to measure but likely has affected sites that are adjacent to high public use areas such as roads, trails, geologic features, and visitor service areas. Natural processes, including erosion, also affect archeological sites. Dam, road, and other facility construction in the past likely resulted in cumulative adverse impacts on cultural resources, including archeological resources.

Some archeological sites in the monument have probably experienced long-term, minor to major adverse cumulative impacts in the past, ranging from gradual deterioration to loss of sites and artifacts. A backlog of archeological survey and condition assessment work continues to contribute to this cumulative impact. The ongoing inventory efforts described under all alternatives, however, would benefit these resources. Implementation of alternatives A, B, C, or D would not increase the overall adverse cumulative effects on archeological resources.

ARCHEOLOGY – CONCLUSION

The continuation of current management under alternative A to preserve and document archeological

resources is in keeping with NPS responsibilities as they pertain to NHPA, resulting in beneficial impacts. Negligible to minor adverse impacts, from limited understanding of the extent of archeological resources would also continue and planned actions would have minor adverse impacts, resulting in a determination of no adverse effect under Section 106.

The actions identified in alternative B would generally benefit the preservation and interpretation of archeological sites and associated collections. New construction, limited to existing developed footprints, and trail access to new areas could result in overall minor to moderate adverse impacts.

Minor to moderate adverse impacts could occur under alternatives C and D due to construction activities, including trails that open new areas to visitors and the development of a walk-in campground on the west side. Actions that might result in a determination of adverse effect under Section 106 will be avoided. Both alternatives contain higher potential for minor to moderate impacts than alternatives A or B, from more construction. Beneficial impacts would include the addition of a cultural resource program.

Impacts in alternatives A-D result in a determination of adverse effect under Section 106 of the NHPA.

Cultural Landscapes and Historic Structures

CULTURAL LANDSCAPES AND HISTORIC STRUCTURES – IMPACTS FROM ALTERNATIVE A (NO ACTION)

In alternative A, the monument would continue to follow current management objectives, preserving and maintaining cultural resources associated with the Pinnacles East Entrance District, including the High Peaks Trail System, and the Ben Bacon Ranch Historic District. To appropriately preserve and protect historic buildings, structures, and cultural landscapes that are listed or eligible for listing on the National Register of Historic Places, all stabilization, preservation, and rehabilitation efforts, as well as daily, cyclical, and seasonal maintenance, would be undertaken in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (1995). Stabilization, preservation, and rehabilitation would have no adverse effect on historic buildings, structures, or cultural landscapes.

Construction under alternative A would have no impact on cultural landscapes and historic structures, because new structures are not proposed in identified cultural landscapes.

The monument would continue to develop baseline inventories for historic buildings, structures, and cultural landscapes. The completion of these baseline inventories would directly benefit the public by providing new information to supplement the interpretive program at Pinnacles National Monument, resulting in long-term, beneficial impacts on historic buildings, structures and cultural landscapes.

Monument managers would continue to follow the general guidance and stabilization measures provided in the 2008 Ben Bacon Ranch Historic District Cultural Landscape Inventory and the 2002 Pinnacles East Entrance District Cultural Landscape Inventory. Prescribed burns and other treatment would continue to be used to restore the historic landscape and control the spread of invasive species. These actions would result in long-term beneficial impacts.

Construction of the remote South Wilderness Trail connection would have no effect because it would not change the general use and distribution patterns of the High Peaks trail system.

CULTURAL LANDSCAPES AND HISTORIC STRUCTURES – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

As in alternative A, beneficial impacts would occur from the continued adherence to standards and the guidance contained in previous inventories. The addition of cultural resource staff and the establishment of a cultural resource program would result in an increase in advocacy for the monument's cultural resources. The new positions would greatly increase the monument's capacity to document, assess, monitor, and treat cultural landscapes and historic structures.

A new trail in the Ben Bacon Ranch Historic District would have a negligible to minor impact with no adverse effect on the historic setting, feeling, and design of the historic district, because its location and design would be compatible with the character of the historic bottomlands road system.

Removal of incompatible waysides, bulletin boards, and signs on trails and near wilderness could have beneficial impacts on the Pinnacles East Entrance Historic District, including the High Peaks Trail System. Signs dating from the historic period, however, would not be removed, avoiding an adverse effect on the integrity of the historic districts.

The removal of noncontributing and incompatible structures would have a beneficial impact on the cultural landscapes of the monument. In particular, the removal of the cluster of incompatible noncontributing structures north of the Bacon House could benefit the

Ben Bacon Ranch Historic District. Similarly, removal of such structures in the Chalone Creek area would benefit the East Entrance Historic District.

Relocation of the entrance station would have a minor impact because it would be located in view of and adjacent to the historic district. The visitor center and its associated parking area would also be in the same vicinity but would have a negligible impact, since it would replace the existing visitor center in its current location, away from and out of view from the historic district. Both of these actions would result in a determination of no adverse effect under Section 106. If the reconfiguration of the campground, or location of the visitor center or picnic area, increases visitation in the historic district, there could be additional negligible to minor impacts on the integrity of the historic district from facilities that detract from the historic period. This would also result in a determination of no adverse effect under Section 106.

Removal of the Chaparral parking area would have a beneficial impact on the historic setting and feeling associated with the High Peaks Trail System by improving its viewshed.

Removal of the remote North Chalone Peak Fire Lookout, a structure eligible for listing on the National Register of Historic Places (NRHP), would have a major adverse impact. A consensus determination of eligibility found the fire lookout eligible for listing on the NRHP under Criterion A for its association with the history of fire protection, and Criterion C as the oldest surviving example of the California Department of Forestry's revised 809R design. The State Historic Preservation Officer concurred with the eligibility determination in 1993. Therefore, removal would result in an adverse effect under Section 106 (requiring development of a MOA with the SHPO and Advisory Council on Historic Preservation). When removal, as a preliminary alternative, was presented to the public, the concept did not generate controversy. Removal and restoration could provide beneficial impacts to surrounding resources, including designated wilderness. The lookout is located within the High Peaks Trail System, part of the East Entrance Historic District, but does not contribute to the significance of that district. In discussions with the SHPO, it was determined that the significance of the lookout could be interpreted on-site after it was removed. Given these factors, removal of the lookout is not likely to constitute a significant impact under the National Environmental Policy Act.

The preparation of a Determination of Eligibility for the Bear Valley School House, and its stabilization, would have a beneficial impact on this historic structure (with no adverse effect under Section 106).

CULTURAL LANDSCAPES AND HISTORIC STRUCTURES – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

The introduction of horseback riding to the Ben Bacon Ranch Historic District has the potential to negatively affect monument resources through the introduction of invasive plant species. These species could alter the historic setting and diminish the integrity of this cultural landscape, as well as other areas. These impacts, however, would be avoided by a requirement that horseback riding not detract from resource or social values, including cultural landscapes. Similarly, the addition of equestrian facilities could potentially have an adverse effect on the integrity of the historic district, but would be integrated into the historic spatial organization and design character of the agricultural historic district to ensure only minor impacts with no adverse effect under Section 106.

As in alternative B, a new trail in the Ben Bacon Ranch Historic District would have a negligible impact with no adverse effect on the historic setting, feeling, and design of the historic district.

If vault toilets are provided to support backcountry camping, they could have a minor adverse impact on the rustic character the Pinnacles East Entrance Historic District cultural landscape if they are visible from the High Peaks Trail System and would result in a determination of no adverse effect.

As in alternative B, the removal of noncontributing and incompatible structures could have a beneficial impact on monument cultural landscapes. The removal of the cluster of incompatible noncontributing features to the north of the Bacon House could benefit the Ben Bacon Ranch Historic District. Similarly, removal of such features at the Bacon Ranch and Chalone Creek areas could benefit the East Entrance Historic District.

If the replacement of the East Pinnacles visitor center is located within sight of the Bacon Homestead, it could have a minor adverse impact on the historic district. Similarly, construction of the entrance station could have a minor adverse impact as identified in alternative B. If the reconfiguration of the campground, or location of the visitor center or picnic area, increases visitation in the historic district, there could be additional minor impacts on the integrity of the historic district. These impacts, however, would be designed to allow for a determination of no adverse effect under Section 106.

As in alternative B, removal of the Chaparral parking area would have a beneficial impact on the historic setting and feeling associated with the High Peaks Trail System. Instead of removal, adaptive reuse of the

North Chalone Peak fire lookout under this alternative would help to preserve this historic structure and result in a determination of no adverse effect under Section 106.

The addition of cultural resource staff and the establishment of a cultural resource program, as in alternative B, would have beneficial impacts on the monument's cultural resources by increasing the monument's ability to advocate for and manage them.

As in alternative B, preparing a Determination of Eligibility for the Bear Valley School House would have beneficial effects.

CULTURAL LANDSCAPES AND HISTORIC STRUCTURES – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

The actions proposed by alternative D would have the same impacts as those described under alternative C, with the exception of effects associated with equestrian use and facilities. Also, removal of the North Chalone Peak fire lookout would have impacts similar to those described under alternative B.

CULTURAL LANDSCAPES AND HISTORIC STRUCTURES – CUMULATIVE IMPACTS

Cumulatively, natural processes, such as fire, as well as past development in the monument have resulted in the disturbance and loss of cultural resources, which have had a minor to moderate, cumulative adverse impact on the integrity of the cultural landscapes. Decades of neglect in the Ben Bacon Ranch Historic District, along with the addition of many noncontributing structures and features in the Pinnacles East Entrance Historic District, have also added to this adverse impact. The integrity of both districts,



Pinnacles Ranch Dedication. NPS photo.

however, remains sufficiently intact to convey their historic importance.

In addition, deferred maintenance and wear and tear associated with visitor access and administrative use has adversely impacted some structures. Some structures that would be considered historic today were moved, removed or modified in the past and have lost their integrity under National Register standards.

The monument has expanded several times to include resources related to cultural landscapes, with the intent of protecting and interpreting those landscapes. Management activities, including restoration efforts, continue to consider the culturally important character-defining patterns and features of cultural landscapes, resulting in cumulative beneficial impacts.

Overall, the cumulative impacts on cultural landscapes and historic structures would be long-term, minor to moderate, and adverse in all alternatives.

CULTURAL LANDSCAPES AND HISTORIC STRUCTURES – CONCLUSION

Under alternative A, the monument’s ability to identify, inventory, conduct research and document cultural resource significance would continue to be limited by staffing constraints. These constraints would have long-term, negligible to minor adverse impacts (but no adverse effect) on historic buildings, structures, and cultural landscapes.

Implementation of alternatives B and D would result in a determination of “no adverse effect” to historic buildings, structures, and cultural landscapes, with the exception of the North Chalone Peak fire lookout. Removal of the fire lookout would result in a major adverse effect under NEPA and the NHPA.

Implementation of alternative C would result in a determination of “no adverse effect” to historic buildings, structures, and cultural landscapes. Each alternative contains potential minor, adverse, long-term impacts mostly due to new development in the vicinity of the campground and Ben Bacon Ranch Historic District.

The monument would continue to preserve and maintain its historic structures and cultural landscapes. Most actions would follow the *Secretary of the Interior’s Standards for the Treatment of Archeology and Historic Preservation*, and the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. With the exception of the North Chalone Peak fire lookout removal in alternative B and possibly also in alternative D, there would be no adverse effects to historic structures or cultural landscapes.

Photos (top to bottom): 1. Amah Mutsun Tribal Band honors former Pinnacles National Monument Superintendent, Eric Brunnemann, for exemplary service and partnership with the AMTB. He is presented with a special gift. 2. West side event. 3. Footprints Day - celebrating people on the landscape of past and present. NPS photos.



Values, Traditions, and Practices of Traditionally Associated Peoples (also known as Ethnographic Resources)

As defined in NPS Management Policies 2006, these resources and values (referred to as ethnographic resources) are objects and places, including sites, structures, landscapes, and natural resources, with traditional cultural meaning and value to associated peoples. Research and consultation with associated people identifies and explains the places and things they find culturally meaningful. Ethnographic resources eligible for the National Register of Historic Places are called traditional cultural properties. Traditionally associated peoples are social/cultural entities such as tribes, communities, and kinship units, as well as park neighbors, traditional residents, and former residents who remain attached to a park area despite having relocated, are “traditionally associated” with a particular park when (1) the entity regards park resources as essential to its development and continued identity as a culturally distinct people; (2) the association has endured for at least two generations (40 years); and (3) the association began prior to establishment of the park. The intensity thresholds for impacts on these resources are described below:

Negligible: Impacts would be barely perceptible and would neither alter resource conditions, such as traditional access or site preservation, nor the relationship between the resource and the affiliated group’s body of practices and beliefs.

Minor: Impacts would be slight but noticeable but would neither appreciably alter resource conditions, such as traditional access or site preservation, nor the relationship between the resource and the affiliated group’s body of practices and beliefs.

Moderate: Impacts would be apparent and would alter resource conditions. Something would interfere with traditional access, site preservation, or the relationship between the resource and the affiliated group’s practices and beliefs, even though the group’s practices and beliefs would continue.

Major: Impacts would alter resource conditions. Something would block or greatly affect traditional access, site preservation, or the relationship between the resource and the affiliated group’s body of practices and beliefs, to the extent that the continuation of a group’s practices and/or beliefs would be jeopardized.

Beneficial impacts would allow access to and/or accommodate a group’s traditional practices or beliefs.

VALUES, TRADITIONS, AND PRACTICES OF TRADITIONALLY ASSOCIATED PEOPLES – IMPACTS FROM ALTERNATIVE A (NO ACTION)

The monument currently lacks cultural resource program staff. The continuing lack of resource management staff would have a long-term moderate adverse impact on the monument’s cultural resources. Without this staff and program, the monument would continue to be hampered in its ability to carry out analysis of projects that might negatively impact the values, traditions, and practices of traditionally associated peoples. The monument’s ability to cultivate relationships with the living descendants of past residents of the region would also remain limited, thereby risking the loss of knowledge of their oral and practiced traditions. Because many of these important but intangible resources are unlikely to continue beyond the current generation, their loss could impoverish the cultural heritage of the entire region.

Continuation of the current level of cultural resource education and interpretation would also lead to minor adverse impacts. The education and interpretation of traditions associated with surviving physical resources represent an important means of preservation. Indirect benefits include the interest stimulated by knowledge of these resources and values, which may result in cultivation of stewardship commitments among visitors.

Increasing the involvement of traditionally associated peoples in research and protection of cultural resources would continue to result in long-term beneficial impacts. Such involvement would help to identify and preserve important values, traditions, and practices of traditionally associated peoples across all historic periods. The active involvement of descendants of all these traditionally associated groups would contribute positively toward the stewardship of their legacies within the monument and associated region.

VALUES, TRADITIONS, AND PRACTICES OF TRADITIONALLY ASSOCIATED PEOPLES – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

The addition of a full-time cultural resource specialist (program manager) position would assist in the process of building and managing a viable cultural resources program. On-site, rather than regional office, staffing would facilitate prioritization of work and result in greater efficiencies and savings. Resources would benefit directly from the ability of local staff to provide closer, more frequent attention, and form a stronger feeling of stewardship which results from an on-site presence.

The cultural resource program would ensure better curation of oral histories that identify the values, traditions, and practices of associated peoples. In addition, the program would provide the monument with the capacity to research and document important resources associated with the living survivors of people who once inhabited the region. On-site capacity would allow the monument to establish and maintain personal relationships with these descendants and to cultivate their active stewardship of the monument's resources on an ongoing basis.

One interpreter would be added to the west side staffing and would focus on providing visitors with information regarding the significance and vulnerability of cultural resources, resulting in beneficial impacts.

VALUES, TRADITIONS, AND PRACTICES OF TRADITIONALLY ASSOCIATED PEOPLES – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Alternative C would produce the same beneficial impacts as alternative B, due to the establishment of a new cultural resources program.

Alternative C would also broaden interpretive efforts to include connection of the monument's cultural resources to the broader history of the region and the interrelationship between natural and cultural resources. This would have an overall beneficial impact on preservation of cultural resources through increased visitor and staff awareness.

VALUES, TRADITIONS, AND PRACTICES OF TRADITIONALLY ASSOCIATED PEOPLES – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

As with alternative C, the establishment of a cultural resources program and increased interpretive efforts would improve the ability of the monument to build knowledge, awareness, and effective decision making about cultural resources. Staffing this program would allow the monument to better protect, document, and develop knowledge of the monument's intangible cultural resources.

VALUES, TRADITIONS, AND PRACTICES OF TRADITIONALLY ASSOCIATED PEOPLES – CUMULATIVE IMPACTS

Adverse cumulative impacts have primarily resulted from past development and the continuing regional loss of elders with knowledge of traditions, practices, and beliefs.

Native American resources are associated with the plants, wildlife, and landscape features which remain important to the descendants of these peoples (e.g.

California condor, deer grass and white root sedge). These resources have been affected by past development in the region. For example, conversion of ethnobotanically important oak savanna and native grassland to agricultural or pastoral development in bottomland areas like Bear Valley and the change in large-scale vegetation patterns resulting from modification of fire regimes associated with Native burning practices have resulted in modification of these landscapes features and plant communities. The most important of these changes occurred a long time ago, but the potential for further change, or intensification of change, still exists. For example, remnant oak savanna and grassland throughout the region may still be converted to vineyards and other agricultural uses.

Some beneficial impacts continue to be realized through efforts by the NPS to collect oral histories, provide access, and preserve ethnobotanical resources.

VALUES, TRADITIONS, AND PRACTICES OF TRADITIONALLY ASSOCIATED PEOPLES – CONCLUSION

Under alternative A, progress would continue to be made in documenting sites, values, practices, and resources important to traditionally associated peoples, but this effort would rely on specific project funding. Alternative A would do little to alleviate the ongoing moderate cumulative adverse impact due to the existing staffing deficiencies.

Establishment and staffing of a cultural resource program under alternatives B, C, and D would improve the protection, study, and knowledge of intangible cultural resources in the monument. No adverse impacts or effects have been identified for actions proposed in these action alternatives.

Museum Collections

Museum collections (prehistoric and historic objects, artifacts, works of art, archival documents, and natural history specimens) are generally ineligible for listing in the national register, and are not subject to Section 106 of the National Historic Preservation Act. The intensity of impacts on museum collections is defined as follows:

Negligible: Impacts would be at the lowest levels of detection; barely measurable with no perceptible consequences, either adverse or beneficial, to museum collections.

Minor: Impacts would affect the integrity of few items in the museum collection but would not degrade the usefulness of the collection for future research and interpretation.

Moderate: Impacts would affect the integrity of many items in the museum collection and diminish the usefulness of the collection for future research and interpretation.

Major: Impacts would affect the integrity of most items in the museum collection and destroy the usefulness of the collection for future research and interpretation.

Beneficial impacts would stabilize, improve, or secure the current condition of the collection or its constituent components to minimize degradation.

MUSEUM COLLECTIONS – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Under this alternative, the monument's existing museum management program would continue to improve the quality of documentation of collections for use by park staff and the public. Under an agreement, management of collections is overseen by a Curator of Record, currently from Rosie the Riveter WWII Home Front National Historic Park, providing some benefit to the understaffed monument.

The current museum collection facility would continue to be monitored and maintained to provide for the preservation and protection of the collections, but would remain vulnerable to fire and inadequate security. If museum collections continue to be housed at the monument, some minor adverse impacts would result from environmental controls that do not meet current NPS standards for museum collections. The monument's ability to focus efforts toward current expectations for documentation, exhibit design, and use for interpretation is limited by both the level of staffing and the available expertise in the monument, having an overall minor adverse impact on museum collections. It is likely, however, that a change in the location and management of collections, due to the development of a shared facility outside of the monument, would occur and would avoid these adverse impacts.

In all alternatives, the monument would keep reference collections (herbarium specimens, artifacts needed for interpretation and display, and other items needed on a periodic basis for park operations) in adequate museum storage facilities and would continue to manage, maintain and process museum collections.

MUSEUM COLLECTIONS – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Impacts would be the same as alternative A, with regard to storage and preservation if these remain the same, or would improve if another better facility were used

The establishment of a cultural resource program would provide on-site staffing and expertise and allow the monument to maintain and make available to the public some collections on-site. This would improve the ability of the monument to meet the museum management program's objectives and would provide a beneficial effect on museum collections and management.

As in alternative A, it is likely that museum collections would be moved to a shared facility outside the monument.

MUSEUM COLLECTIONS – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Impacts would be the same as in alternative B, with one possible exception. The replacement East Pinnacles visitor center would be larger and may provide additional space to house collections at the monument, a beneficial impact.

MUSEUM COLLECTIONS – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts would be the same as in alternative C.

MUSEUM COLLECTIONS – CUMULATIVE IMPACTS

A shared national park museum collection facility, to be located in an existing structure at Rosie the Riveter World War II Home Front National Historical Park, is in the planning stages. The monument is likely to benefit from this development, which would provide professional staff, appropriate storage, and increased physical access to the collections. It is reasonably foreseeable that the monument would house the majority of its collections at this facility, providing a long-term beneficial effect to museum collection storage and management.

MUSEUM COLLECTIONS – CONCLUSION

If museum collections continue to be housed at the monument, some minor adverse impacts could continue to occur from environmental controls that do not meet current NPS standards for museum collections.

In alternatives B-D, the monument's ability to focus efforts toward current expectations for documentation, exhibit design, and use for interpretation would benefit by having cultural resources staff on-site to manage the program. Because it does not provide a cultural resources program, minor, long-term, adverse impacts would continue under Alternative A.

Monument Operations

Monument operations refers to the current management structure of the park to provide policy direction for the protection, public use, and appreciation of the monument, and the ability of the current staff to adequately protect and preserve vital resources and provide for an effective visitor experience. The discussion of impacts on management, operations, and staffing focuses on the type of management structure, the amount of staff available to ensure public safety, and the ability of the staff to protect and preserve resources given current funding and staffing levels. Staff knowledgeable about the management of the monument was consulted to evaluate the impacts of implementing each alternative.

The thresholds of change for the intensity of an impact are defined as follows:

Negligible: The effect would be at or below the lower levels of detection, and would not have an appreciable effect on park management and operations.

Minor: The effects would be detectable, but would be of a magnitude that would not have an appreciable adverse effect on park management and operations.

Moderate: The effects would be readily apparent and would result in substantial adverse change in park management and operations in a manner noticeable to staff and the public.

Major: The effects would be readily apparent and would result in substantial adverse change in park management and operations in a manner noticeable to staff and the public, and would be markedly different from existing operation.



Bear Gulch Nature Center. NPS photo.

OPERATIONS – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Under all alternatives, the majority of administrative offices would remain in the monument. Under alternative A, administrative positions would remain in Bear Gulch. Cooperative efforts with partners and universities would continue on an as-needed basis as staffing and funding allows. The current organizational structure, with limited staffing and operations, is generally centralized and would continue to function with some deficiencies. Although some staff would be added on the west side over time, staffing levels throughout the monument would continue to be inadequate to meet public demands for increased interpretation and education as well as meeting the resource management needs of the monument.

The East Pinnacles visitor center would remain unchanged. The current visitor center is small and shared with the campground's general store. The lack of separation from the campground store and the lack of sufficient space to accommodate groups, install interpretive displays, or provide adequate working space for staff would continue to adversely affect monument operations. In addition, the building itself, inherited from a private campground operation, is in poor condition and lacks energy efficiency. The building has a deteriorating foundation and does not provide water or restrooms to visitors, or office space for staff. The maintenance and expense involved with the upkeep of a substandard building that provides marginal operational benefits is a moderate adverse effect on overall operations.

The fact that the monument has two sides, not joined by a common road, poses operational challenges. Monument operations would continue to be based out of the east side. This physical separation of the east and west sides results in inefficiencies for management, including staff and equipment mobilization and travel. Overall, the actions proposed in alternative A would not alleviate the long-term, minor to moderate, adverse impacts on monument operations.

OPERATIONS – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Alternative B seeks to limit the monument's development footprint, but does provide for a small replacement visitor center on the east side. This facility would replace a building that is difficult and expensive to heat, cool, and maintain. This building would benefit operations by providing facilities that can more appropriately accommodate small groups and orient visitors and by reducing operational costs. Short-term, moderate, adverse impacts associated with construction and demolition include the need to provide visitor

information and services in a temporary location, which can be achieved by using the Bear Gulch Nature Center and the entrance station.

Alternative B provides for a higher level of staffing for increased restoration efforts, a new cultural resources program, new interpretive and educational programming, and additional maintenance needs. New office space would not be provided in alternative B. When the new staff proposed in this alternative is added to monument operations, already limited office space would be further cramped, resulting in minor to moderate adverse impacts.

Removal of the Moses Spring and Chaparral parking lots would slightly reduce the amount of road infrastructure to be maintained. Removal of the North Chalone Peak fire lookout would require relocation of the radio repeater, a minor adverse impact, although it would also reduce maintenance needs associated with the fire lookout.

Removal of waysides, unnecessary structures and other facilities from the monument, as proposed in alternative B, would result in fewer maintenance needs, allowing staff to focus their efforts on a more consolidated visitor services area, increasing efficiency. Removal of non-contributing buildings in Bear Gulch, however, would also adversely affect operations by reducing the amount of available office space. With the addition of staff proposed in alternative B, this would create a minor adverse impact.

OPERATIONS – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

A new larger visitor center on the east side would both add maintenance costs and benefit operations by providing facilities that can more appropriately accommodate groups and house interpretive services. The new visitor center could serve as a base of operations for interpretive staff, reducing the amount of back and forth travel currently needed between this key visitor services area and the Bear Gulch administrative offices.

Alternative C provides for a higher level of staffing for a variety of needs including a new cultural resources program, new interpretive and educational programming, and additional maintenance needs. New maintenance needs would include the equestrian facilities, backcountry campsites, the Bacon House, day use facilities at the Bear Valley Schoolhouse, and a walk-in campground on the west side. This alternative would add trail workers, custodial staff, and law enforcement rangers. These staff additions would reduce the adverse impacts of the above new development, resulting in minor to moderate adverse effects on park operations. New office space would be provided at the

Bacon House and, possibly, Condor Gulch, a beneficial long-term impact.

Equestrian use would result in minor adverse impacts on operations, requiring an additional level of trail maintenance, facility upkeep, and administrative tasks (i.e. permit administration, enforcement, etc.).

West side and backcountry camping would require additional staff to patrol, monitor, and manage use. This alternative provides the necessary staffing, resulting in negligible effects.

Removal of the Chaparral parking lot would slightly reduce the amount of road infrastructure to be maintained., a beneficial effect.

Overall, the actions proposed under alternative C would have a long-term beneficial impact on monument operations, primarily by increasing and relocating staff.

OPERATIONS – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts would be similar to alternative C except for four major differences. First, the replacement east side visitor center would be slightly smaller, which would provide less space for staff needs. Second, equestrian uses would not be permitted and thus would not require administration. Third, the Condor Gulch buildings would continue to be used for storage or administrative needs. Finally, alternative D also calls for sharing some staff hours off-site at regional information centers. This could benefit operations by slightly reducing office needs in the monument.

OPERATIONS – CUMULATIVE IMPACTS

Past and ongoing projects, including road and facility maintenance and repairs, have had long-term, moderate, beneficial effects on monument operations by maintaining the inventory of monument structures. Aging facilities and utilities would continue to be replaced or modified as needed when funds are available.

Inadequate staffing and funding at Pinnacles have resulted in a maintenance backlog which is often readily apparent to the public, a moderate, long-term, cumulative effect on monument operations and infrastructure.

Eventually, more sustainable and efficient facilities and utility systems would replace existing, less sustainable systems, resulting in cumulative beneficial effects over the long-term.

OPERATIONS – CONCLUSION

Alternative A would result in little immediate change to monument infrastructure or operations and would continue current levels of funding and staffing. Alternative A would not adequately address long-term, moderate, cumulative, adverse impacts on monument operations due to past deficiencies. Ongoing maintenance and replacement of existing facilities would result in some beneficial impacts over time.

Alternative B would result in few changes to operational infrastructure, but would increase staffing, resulting in long-term beneficial impacts on functional capacity, but minor to moderate adverse effects due to insufficient office capacity. Ongoing maintenance and replacement of existing facilities would result in cumulative beneficial impacts over time.

Under alternatives C and D, minor to moderate adverse operational impacts would occur from facility and utilities needs at the Bacon House and Bear Valley Schoolhouse, as well as the costs and maintenance associated with new facilities. Both alternatives would also have long-term beneficial impacts on monument operations, primarily by increasing and relocating staff, providing office space, and redesigning the visitor entry experience on the east side.

Socioeconomics

Reducing or increasing visitor services and amenities affects the annual number of visitors, indirectly impacting visitor spending in local and regional economies. Increased spending on projects to implement GMP actions and develop amenities could directly benefit local or regional businesses. Employment opportunities, flowing from short-term construction projects and long-term staffing, benefit local communities. Outdoor recreation opportunities, natural and cultural preservation, interpretation, education, community outreach, and stewardship opportunities all contribute to the region's quality of life. Also, monument actions can affect the level of service and opportunities available to people of diverse socioeconomic populations and backgrounds.

Socioeconomic impacts were determined based on professional expertise and judgment. This analysis relies on qualitative analysis of the impacts of each alternative, as actual visitor numbers are not estimated, spending values are for comparison only, and influence area data was mainly available at the broad county and regional district levels.

Beneficial impacts result in generally recognized improvements to established social and economic

environment. Adverse impacts are those effects that are generally recognized to diminish the established social and economic environment.

The thresholds of change for the intensity of an impact are defined as follows:

Negligible: No effects occur or the effects on socioeconomic conditions are below or at the level of detection.

Minor: The effects on socioeconomic conditions are small but detectable, and only affect a small number of businesses and/or a small portion of the population. The impact is slight and not detectable outside the affected area.

Moderate: The effects on socioeconomic conditions are readily apparent. Any effects result in changes to socioeconomic conditions on a local scale (e.g. a gateway community) within the affected area.

Major: The effects on socioeconomic conditions are readily apparent. Measurable changes in social or economic conditions at the county or regional level occur. The impact is severely adverse or exceptionally beneficial within the affected area.

SOCIOECONOMICS – IMPACTS FROM ALTERNATIVE A (NO ACTION)

Under alternative A, current visitor service levels and amenities would continue. No new major changes would be made that would affect the current local or regional economic impacts of the monument.

Visitation would continue to increase incrementally with visitation spiking seasonally from March to early June, and on weekends. Monument visitation would continue to have a beneficial impact on the local economy. For example, the monument brought \$2.6 million in non-local travel spending (NPS, 2008), compared to a total of \$77 million in travel-related revenue in San Benito County and almost \$2 billion in Monterey County (Runyon, 2007).

Limited education programs would continue as funding allows, but the monument would be unable to fill all requests for outreach and education programs. Existing educational programs would continue to have a beneficial effect on the local quality of life and economy.

The current level of NPS employment would be maintained, continuing to have a small beneficial effect on the local economy. Additional staffing needs have already been identified and requested. If these positions are added in the future, total spending on staff would increase by \$830,000.

Facilities to support extended family and group uses are few and accessible opportunities are minimal. These factors constitute minor adverse impacts on the capacity of the monument to respond to expected demographic shifts toward ethnically diverse and aging populations.

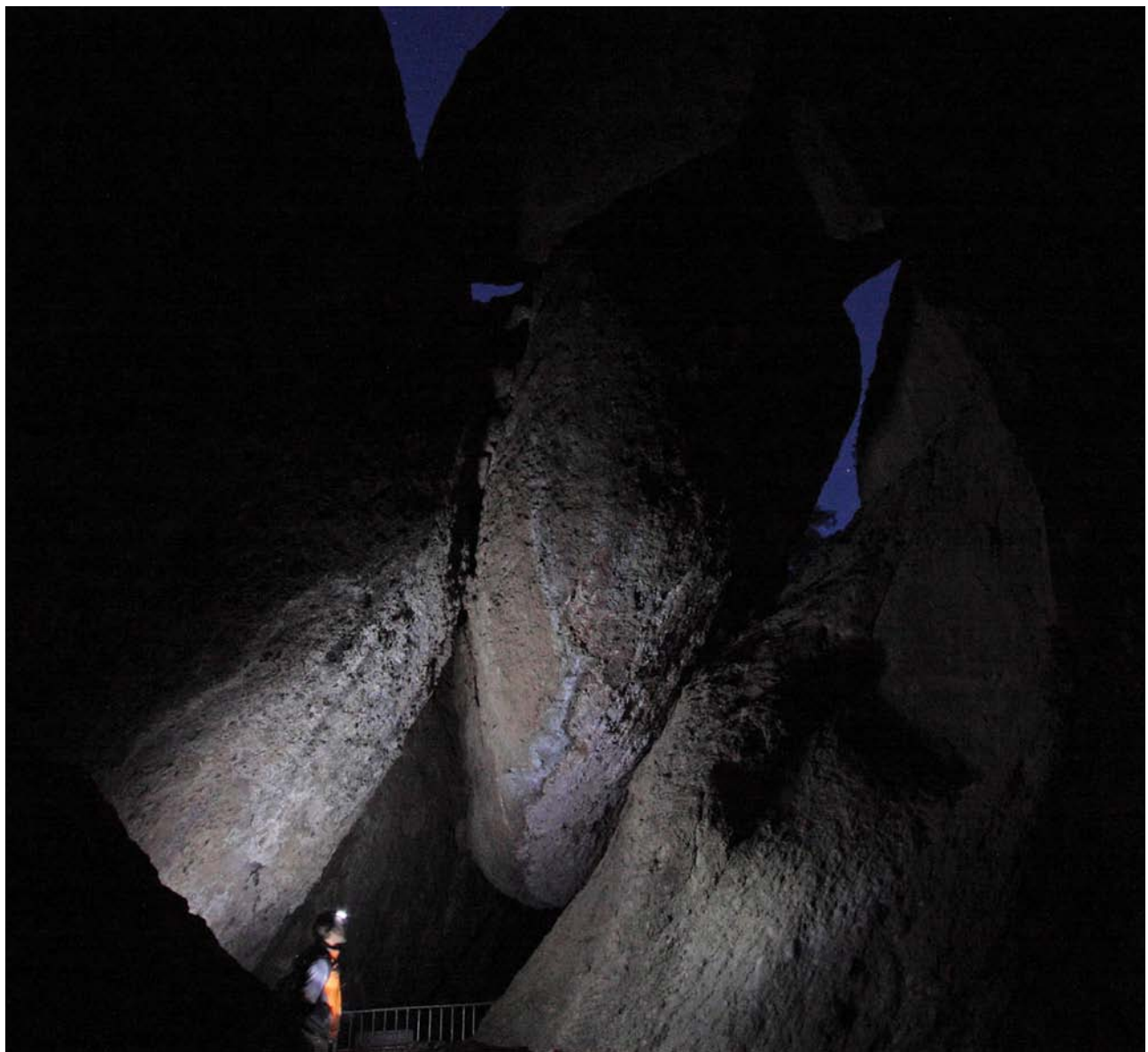
SOCIOECONOMICS – IMPACTS FROM ALTERNATIVE B (EMPHASIZE BACKCOUNTRY EXPERIENCES)

Alternative B includes some additional outreach in nearby communities, but this outreach would be focused on teaching wilderness values and opportunities. This level of outreach, with a very narrow focus, could result in small beneficial quality of life effects. The adverse impacts of minimal facilities to support

extended family and group use would be the same as described under alternative A.

A replacement visitor center and new day use area would be built on the east side. New opportunities for improved interpretation, education, and recreation could result in a slight increase in visitation and a beneficial impact to the local economy.

The total one-time costs of construction and other projects would be \$26.6 million, more than twice the one-time capital costs of alternative A. The monument would create new employment positions, adding \$1.1 million to the annual operating budget for staffing. This additional spending would result in beneficial impacts on the local economy.



Balconies Cave at twilight. Photo by Paul G. Johnson.

SOCIOECONOMICS – IMPACTS FROM ALTERNATIVE C (EXPAND VISITOR EXPERIENCES)

Under alternative C, more of the monument is zoned semi-primitive to allow higher use levels. Also, new activities like horseback riding and backcountry camping would be introduced. By zoning much of the monument as semi-primitive to accommodate new activities and by adding new user groups, visitation may increase over alternatives A and B, resulting in beneficial impacts on the local economy.

Additional full-time staff positions under this alternative are required for increased research and restoration efforts, new interpretive and educational programming, and additional maintenance needs. This increase in staff would also have a beneficial effect on the local economy.

A replacement visitor center and day use area would be built on the east side. New opportunities for improved interpretation, education, and recreation could result in a slight increase in visitation and a beneficial impact to the local economy. Most opportunities for large groups would be created through larger facilities and zoning more of the monument for group use.

The total one-time costs of construction and other projects would be \$36.3 million, \$9.7 million more than alternative B. The monument would also create new employment positions, adding \$250,000 more than alternative B to the annual operating budget for staffing. This additional spending would result in beneficial impacts on the local economy.

A small walk-in campground would be built on the west side. The campground may increase visitation slightly and would create more opportunities for previously underrepresented communities on the west side, resulting in long-term beneficial effects.

The monument would emphasize serving multiple audiences through a wide variety of media and programming, including interactive displays, more waysides on trails, additional interpretive materials, and more opportunities for visitor involvement in science and stewardship projects. New opportunities for improved interpretation, education, and recreation could result in a slight increase in visitation and a beneficial impact to the local economy and underrepresented communities.

SOCIOECONOMICS – IMPACTS FROM ALTERNATIVE D (LINK PEOPLE AND RESOURCES: PREFERRED ALTERNATIVE)

Impacts under alternative D would be very similar to those of alternative C. Spending on additional staffing would be approximately the same as alternative C,

while spending on construction and other projects would be \$4 million less.

SOCIOECONOMICS – CUMULATIVE IMPACTS

Past and ongoing monument management has had a beneficial effect on the region's economy, especially through tourism. The monument provides a national park experience that draws visitors from the San Francisco Bay area and beyond, including international visitors.

The creation of a San Benito County Parks and Recreation Commission and the subsequent planning effort (San Benito County Parks and Recreation Master Plan) could eventually tie Pinnacles recreational resources to other county resources in a comprehensive network of recreational opportunities. A comprehensive network of trails and recreational opportunities connecting an improved monument trail system to other regional recreation resources could increase the quality of life for local residents, having a substantial beneficial long-term effect.

SOCIOECONOMICS – CONCLUSION

Alternatives A and B would have long-term, negligible to minor adverse impacts on the local and regional socioeconomic landscape, due to a lack of facilities or activities for older or ethnically diverse visitors. If the monument does not implement changes in facilities and services in anticipation of these expected demographic shifts, it would increasingly become a less desirable destination for a greater proportion of possible visitors. Both alternatives have continuing beneficial impacts due to construction and employment-related spending.

Alternatives C and D would have long-term beneficial impacts on the local and regional socioeconomic landscape, primarily because they provide new opportunities for previously underrepresented groups and accommodates increased visitation.

Increased visitation due to an improved visitor center, additional recreational opportunities, and additional camping, under alternatives C and D, could benefit the local economy.

Interpretive and educational program improvements would have beneficial effects in alternatives B, C, and D.



6

Consultation & Coordination

Creek detail in lower Bear Gulch. Photo by Gavin Emmons © 2011.

Chapter 6: Consultation and Coordination

Public involvement and consultation efforts were ongoing throughout the process of preparing the General Management Plan/Environmental Assessment. Public involvement methods included conducting public meetings and workshops, holding stakeholder meetings, distributing newsletters, posting planning information on appropriate websites, published Federal Register notices, and sending press releases. Public involvement is a necessary and important part of the planning process that provides valuable information. Consultation and coordination among the agencies and the public were vitally important throughout the planning process. The public had three formal avenues for participation in the development of the plan: the ability to participate in public meetings, provide comments on information in newsletters, and review and comment on the draft plan. Public comments were welcomed at any time throughout the planning process.

Public Scoping

Initial GMP Launch. The Pinnacles National Monument GMP planning team initially launched the GMP planning process in 1998 and completed public scoping. During the development of preliminary alternatives, the planning team decided to postpone the planning process until acquisition of the Pinnacles Ranch property, which would expand opportunities associated with the GMP.

GMP Reinitiation. The GMP process was reinitiated in the summer 2004 and following the acquisition of the Pinnacles Ranch property in March 2006, the team conducted additional preliminary scoping that summer. A postcard was distributed to visitors to provide information about the GMP process and to seek comments.

Scoping Newsletter (#1). In February 2007, the planning team produced and mailed newsletters in English and Spanish to about 400 organizations and individuals on the park mailing list and distributed 1,500 additional copies to visitors at the monument, neighbors in local communities, and attendees at public meetings. The purpose of the newsletter was to announce the start of the planning process; inform the public on how they could participate; and to ask for thoughts, ideas, and concerns about the monument's purpose and significance statements and what issues should be addressed in the GMP. The newsletter also contained information on the date, time and location of public scoping meetings. May 31, 2007

was established as the close of the public comment period. Comments were also accepted after this date. Information about comments received during scoping is below.

Websites. The newsletter was published and made available for comment on the National Park Service's Planning, Environment and Public Comment (PEPC) website and the monument's main website. Additional updates on the GMP were provided on the websites. An email list was also developed and maintained so that the public could receive updated information through email.

Announcements and Notices. Press releases announcing the GMP planning process were also distributed to local newspapers. Several newspapers carried feature stories on the need for a new GMP at Pinnacles National Monument and announced the upcoming public meetings. On April 6, 2007, a notice of intent to prepare a general management plan and environmental impact statement was published in the Federal Register. During the analysis of environmental impacts, it was determined that an environmental assessment would be prepared rather than an environmental impact statement.

Public Meetings. In March 2007, the planning team held four public scoping meetings in the surrounding region. The meetings included a presentation on the GMP process and draft park purpose and park significance statements. Displays and stations were set up to provide attendees opportunities to have one-on-one conversations with members of the planning team. After the presentation, group discussions were held about park planning issues and planning team members recorded comments on flipcharts. The public meeting locations, dates, and number of attendees included the following:

Soledad, March 7, 2007, attended by 15 members of the public

Hollister, March 19, 2007, attended by 11 members of the public

Paicines, March 20, 2007, attended by 7 members of the public

Santa Clara, March 24, 2007, attended by 3 members of the public

Stakeholder Meetings. In addition to public meetings, the monument staff and the planning team conducted presentations, meetings and conversations with local organizations, agencies, and tribes. Organizations and agencies included the Amah Mutsun Tribal Band, King City Rotary, San Juan Bautista Rotary, California Department of Fish and

Game Advisory Commission, and the Salinas Rotary. In addition, park staff attended the Salinas Valley Fair and provided planning information.

Scoping Comments Received. During the scoping period, Pinnacles received 110 written comment letters. Most of the comments were submitted using the comment form included in the newsletter which was also distributed at the park visitor center, public and stakeholder meetings, and posted on PEPC. The newsletter comment forms, previous comments summary from the 1998 scoping period, comments from a postcard produced in the summer of 2006, public meeting flipchart comments, e-mail comments, letters, and internal staff comments all were entered directly into the PEPC site. Most comments received were from individuals and organizations in California. Native American tribes, agencies, and organizations submitting comments included: Access Fund, Amah Mutsun Tribal Band, California Indian Wukachi tribe, Californians for Western Wilderness, California Wilderness Coalition, California Wilderness Legacy Project, Friends of Pinnacles (various members), Girlventures, and Inn at the Pinnacles. The comments were considered and incorporated into the issues for the plan and were summarized in the second newsletter.

Results of Scoping Newsletter (#2). The NPS distributed a second newsletter in February 2008, describing issues identified during public scoping. The public comment summary reflects the wide range and diversity of comments received. Issues that received the greatest number of comments included: ideas about visitor education programs and interpretation opportunities; rock climbing management approaches; support for protection of cultural and natural resources; preservation of wilderness-related

values; support for outreach to communities, tribes, landowners, and schools; and ideas for visitor services and transportation, particularly on the west side and on the newly acquired Pinnacles Ranch. In addition, some comments provided specific ideas for preserving what's important and providing better visitor services and programs. Some of the more detailed ideas could either be implemented by the park at any time or could be used to develop future plans (such as a trails plan) that will implement the GMP.

Preliminary Alternatives / Management Concepts

Preliminary Alternatives Newsletter (#3). The Pinnacles National Monument GMP planning team developed preliminary alternatives for the GMP in Winter/Spring 2007-2008. In August 2008, the GMP team released a third newsletter with preliminary management concepts for public review. Approximately 500 newsletters were mailed to organizations and individuals on the park mailing list. In addition, nearly 1,000 newsletters were distributed at the park visitor center, to local communities and businesses, and at public and stakeholder meetings.

The purpose of the newsletter was to provide opportunities for the public and stakeholders to comment on the preliminary alternatives to identify preferred concepts and management actions and ideas for improving the preliminary alternatives. Preliminary alternatives presented to the public included:

- Continuation of Current Management
- Research and Learning
- Backcountry Experience
- Expanded Visitor Experience



Public meeting in Paicines, California. NPS photos.

A comment form was included in the newsletter so that members of the public could provide feedback to the planning team. Comments on the preliminary management concepts were received through February 28, 2008. Press releases asking for public comments on the preliminary management concepts were distributed to local newspapers (*Hollister Free Lance*, *South County Newspapers*, *San Jose Mercury News*, and *San Francisco Chronicle*).

The newsletter was also published and made available for comment on the PEPC website. A link to the newsletter was provided on the monument's website as well as an email message that was sent to the GMP email list. Press releases asking for public comments on the preliminary management concepts were distributed to local newspapers. Comments on the preliminary management concepts were received through October 31, 2008. The newsletter also contained information on the public open house meetings.

Public Meetings. Three open house meetings were held in the local communities in late August 2008. The open house format was chosen to allow the public to provide comments and ideas on the preliminary alternatives presented in this newsletter and to have one-on-one discussions with planning team members. Instead of providing a formal presentation, four stations were set up around the meeting room for each alternative. Each station was staffed by a planning team member who presented a summary of the alternative and wrote down comments on flip charts. Open house meeting locations and number of attendees included:

Paicines, August 25, attended by 3 members of the public

Hollister, August 26, attended by 10 members of the public

Soledad, August 27, attended by 11 members of the public

Staff and Stakeholder Meetings. Throughout the comment period presentations, meetings and conversations with local organizations, agencies and tribes were conducted by the Superintendent, other park staff, and members of the planning team. Organizations and agencies included the San Benito County Board of Supervisors, Monterey County Board of Supervisors, Pinnacles Partnership, Amah Mutsun Tribal Band (at West Side Community event), and regional Rotary groups.

Comments Received. The planning team received a total of 56 written or electronic (email / PEPC) comments. Five transcripts of comments made at open house meetings, staff meetings, and stakeholder meetings are also included in the analysis.

Agencies and organizations that submitted comments through stakeholder meetings or individual letters include: Access Fund, Amah Mutsun Tribal Band, California Wilderness Coalition, Californians for Western Wilderness, and San Benito County Board of Supervisors. Comments were also submitted by members of the California Native Plant Society, Sierra Club (various members), and Pinnacles Partnership (various members).

Comments on the preliminary alternatives included both preferences for the management concepts and preferences for the desired conditions associated with each of the alternatives. Most commenters expressed a preference for an alternative or a mix of particular alternatives. Most commenters did not identify Continuation of Current Management as a desired or acceptable alternative; instead they suggested adding elements from the other alternatives. Five commenters identified the Research and Learning alternative as their preferred alternative, and another fifteen commenters preferred a combination that included elements of the Research and Learning alternative. Some of the



Public meetings in Soledad and Hollister, California. NPS photos.

commenters were concerned that the Backcountry Experience alternative would limit use or access, while others felt that the Expanded Visitor Experience alternative provided too many opportunities for overdevelopment. Twelve commenters identified the Backcountry Experience alternative as their preferred alternative, and an additional twelve commenters chose the Backcountry Experience alternative in combination with other alternatives, primarily the Research and Learning alternative. Five commenters identified the Expanded Visitor Experience alternative as their preferred alternative, while another nine chose to combine that alternative with other alternatives (primarily Research and Learning). In summary, many commenters generally liked the educational opportunities and recreational access provided by the Research and Learning alternative, tempered by a concern for preservation of the wilderness values and experiences expressed in Backcountry Experiences. Those who liked the Backcountry Experiences and the Expanded Visitor Experience alternatives were less likely to mix and match with other alternatives, while many proponents of the Research and Learning alternative saw it as a compromise between the Backcountry Experiences and the Expanded Visitor Experience alternatives. As a result, the original alternatives were modified to incorporate some new ideas and a new hybrid alternative was developed (as explained in the introduction to this EA).

Consultation with Other Agencies, Officials, and Organizations (To Date)

SECTION 7 CONSULTATION

Consultation with U.S. Fish and Wildlife Service. The Endangered Species Act of 1963, as amended, authorizes federal agencies to enter into early consultation with the U.S. Fish and Wildlife Service (USFWS) to ensure that any federal action would not jeopardize the existence of any listed species or destroy or adversely modify its habitat. During the preparation of this plan, NPS staff initiated consultation with the Ventura U.S. Fish and Wildlife Office in March 2008 to determine what threatened and endangered species in San Benito and Monterey counties should be considered during preparation of the EA. During the public review period for this EA, additional

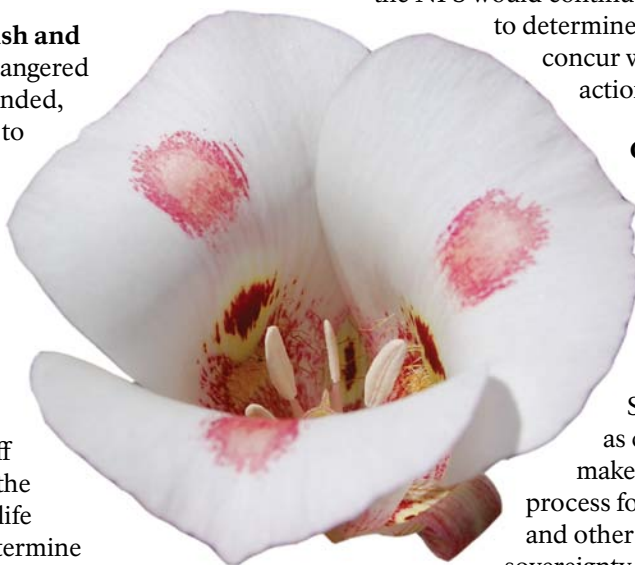
consultation with the USFWS will occur to affirm concurrence with the determinations of effect on listed or proposed species.

SECTION 106 CONSULTATION

Federal agencies that have direct or indirect jurisdiction over historic properties are required by Section 106 of the National Historic Preservation Act (NHPA), as amended (16 USC 270, et seq.), to take into account the effect of their undertakings on properties either listed in or eligible for listing in the National Register of Historic Places.

Consultation with the California State Historic Preservation Office. Under the terms of stipulation VI.E of the 1995 programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers, the National Park Service, "...in consultation with the SHPO [state historic preservation office], will make a determination about which undertakings are programmatic exclusions under IV.A and B, and for all other undertakings, whether there is sufficient information about resources and potential effects on those resources to seek review and comment under 36 CFR 800.4-6 during the plan review process."

To meet the requirements of the Advisory Council on Historic Preservation implementing Section 106, the National Park Service sent a letter to the California State Historic Preservation Officer in March 2008 inviting the office to participate in the planning process. During the public review period for this EA, the NPS would continue to confer with the SHPO to determine whether the SHPO would concur with effects of the proposed actions.



Consultation with Native American Tribes. The National Park Service recognizes that indigenous peoples may have traditional and contemporary interests and ongoing rights in lands now under National Park Service management, as well as concerns and contributions to make for the future via the scoping process for general management plans and other projects. Related to tribal sovereignty, the need for government-to-government Native American consultations stems from the historic power of Congress to make treaties with American Indian tribes as sovereign

nations. Consultations with American Indians and other Native Americans, such as Alaska Natives and Native Hawaiians, are required by various federal laws, executive orders, regulations, and policies. For example, such consultations are needed to comply with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended. Implementing regulations of the Council on Environmental Quality (CEQ) for the National Environmental Policy Act of 1969, as amended (NEPA), also call for Native American consultations.

During the public scoping period Pinnacles National Monument staff invited several Native American groups to meet to discuss the general management planning process underway and any concerns they might have about protecting, preserving, and managing Pinnacles National Monument's resources. The planning team met with the Amah Mutsun Tribal Band, a state recognized tribe, several times throughout the planning process to receive input on issues and ideas that should be considered in the general management plan.

Future Compliance Requirements

The NPS will conduct additional site-specific environmental analysis as individual projects or actions included in the preferred alternative are proposed for implementation. Some of the specific future compliance requirements of the preferred alternative are described in the *Alternatives* and *Environmental Consequences* chapters. Included are the NPS determinations of how those individual requirements relate to the National Environmental Policy Act (NEPA), the Endangered Species Act (Section 7 requirements), and the 2006 programmatic agreement in relation to cultural resources (Section 106 National Historic Preservation Act requirements).



Photos (clockwise from top left): 1. Andean Condor release ceremony at Parque Nacional Quebrada del Condorito, Pinnacles sister park in Argentina. NPS photo by Denise Louie. 2. September 2011 Condor Release witnessed by Amah Mutsun and Christensen Fund representatives, and Karen Beppler-Dorn, Pinnacles NM Superintendent. Photo by Chuck Striplen. 3. West Side public meeting. NPS photo. 4. West Side cultural event. NPS photo.

Public Officials, Agencies, and Organizations Receiving This Plan

Federal Agencies

Bureau of Land Management, Hollister Field Office
Bureau of Reclamation
Environmental Protection Agency, Region 9 and
Federal Activities Office
National Oceanic and Atmospheric Administration /
National Weather Service
National Park Service
Denver Service Center
Golden Gate National Recreation Area
Eugene O'Neill National Historic Site
John Muir National Historic Site
Juan Bautista De Anza National Historic Trail
Natural Resource Program Center
Pacific West Region
Park Planning and Special Studies Division
Point Reyes National Seashore
Port Chicago Naval Magazine National Memorial
Rosie the Riveter/World War II Home Front
National Historical Park
San Francisco Maritime National Historical Park
Santa Monica Mountains National Recreation Area
Sequoia and Kings Canyon National Parks
Water Resources Division
Yosemite National Park
National Science Foundation, Earthscope
U.S. Army Garrison Fort Hunter Liggett
U.S. Fish and Wildlife Service, Ventura Office and
Hopper Mountain National Wildlife Refuge
U.S. Forest Service, Los Padres National Forest
U.S. Geological Survey, Western Ecological Research
Center

U.S. Senators and Representatives

Honorable Barbara Boxer, U.S. Senator, California
Honorable Dianne Feinstein, U.S. Senator, California
Honorable Sam Farr, U.S. Representative, 17th District,
California

State Elected Officials and Agencies

California State Senators and Assembly Members
California Department of Fish and Game
California Department of Transportation, District 5
California State Parks, Monterey and Southern Service
Center
California Division of Forestry (Bear Valley Fire
Station)
CAL Fire
Fremont Peak State Park
Henry W. Coe State Park
SHPO, Office of Historic Preservation
Point Lobos State Reserve

Local Officials and Agencies

Association of Monterey Bay Area Governments
(AMBAG)
City of Coalinga
City of Gonzales
City of Gilroy
City of Greenfield
City of Hollister
City of King City
City of Los Banos
City of Marina
City of Monterey
City of Salinas
City of San Juan Bautista
City of Soledad
Coyote Hills Regional Park, Native American Programs
East Bay Regional Parks
Monterey County Board of Supervisors
Monterey County Convention
Monterey County Farm Bureau
Monterey County Parks
Monterey County Planning Department
Monterey Peninsula Regional Parks District
San Benito County Agricultural Commissioner
San Benito County Farm Bureau
San Benito County
San Benito County Office of Education
San Benito County Planning Department
San Benito County Resource Conservation District
San Benito County Weed Management Area
Santa Cruz County Parks
Transportation Agency for Monterey County

Organizations and Institutions

Access Fund
 Amah Mutsun Tribal Band
 American Conservation Experience
 Bat Conservation International
 Bay Nature
 Big Sur Historical Society
 Big Sur Land Trust
 Bitterwater-Tully Union School District
 California Academy of Science
 California Dressage Society
 California Indian Basketweavers Association
 California Invasive Plant Council
 California Native Plant Society, Monterey Chapter and Sacramento Office
 California Oak Foundation
 California Preservation Foundation
 California Polytechnic State University, SLO
 California Rangeland Trust
 California Rangeland Conservation Coalition
 California State Horseman's Association
 California State University, Monterey
 California State University, San Diego
 California State University, San Jose
 The California Wilderness Coalition
 Cal-BLMX Inc.
 Californians for Western Wilderness
 Cattlemen's Association, San Benito and Monterey Counties, Sacramento Office
 Cave Research Foundation
 Central Coast Peruvian Horse Club
 Chalon Nation
 Civilian Conservation Corp Legacy
 Costanoan Indian Research, Inc.
 Costanoan Ohlone Esselen Nation
 Desert Research Institute, Reno and Las Vegas
 FAA San Jose FSDO
 Fresno Audubon Society
 Friends of Pinnacles National Monument
 Gavilan College, Gilroy and Hollister
 Gilroy Visitors Bureau
 Girlventures
 Golden Gate Audubon Society
 Gonzales Chamber of Commerce
 Hartnell College
 Hastings Reserve
 Hispanic Chamber of Commerce
 Hollister Hills State Vehicular Rec. Area
 Hollister Rotary
 Institute for Wildlife Studies
 Jefferson School
 King City Rotary
 King City School District
 MOCO Fairgrounds
 Monterey Bay Aquarium
 Monterey County Historical Adv. Commission
 Monterey County Historical Society
 Monterey Fire Safe Council

Monterey Peninsula Audubon Society
 Morro Coast Audubon Society
 Mountain Tools
 National Park Foundation
 National Parks Conservation Association
 National Speleological Society
 National Trust/Historic Preservation
 The Nature Conservancy
 Pacific Grove Museum of Natural History
 Pacific Studios
 Pinnacles Partnership
 Point Reyes Bird Observatory
 Prunedale Cattle Company
 Public Library of King City
 Public Library of Salinas
 Public Library of San Benito County
 Public Library of San Juan Bautista
 Public Library of Soledad
 Rock Springs Ranch
 Royal Elk Park Management
 Rural Pig Management, Inc.
 Sacramento City College
 Salinan Nation Cultural Association
 Salinan Tribe SLO and MOCO
 Salinas Valley Fair Grounds
 San Benancio 4-H
 San Benito County Fairgrounds
 San Benito County Historical Society
 San Diego Zoo
 San Juan Bautista State Historical Park
 San Juan Bautista Rotary
 Santa Barbara Botanical Gardens
 Santa Barbara Museum of Natural History
 Santa Barbara Audubon Society
 Santa Clara University
 Santa Cruz Predatory Bird Research Group
 Sierra Club Loma Prieta Chapter
 Sierra Club Santa Lucia Chapter
 Soledad High School
 Student Conservation Association
 Sustainable Monterey County
 UC Berkeley
 UC Cooperative Extension, Hollister
 UC Davis
 UC Davis Hydrology and Cooperative Extension Programs
 UC Santa Cruz
 Ventana Wilderness Society
 Waksachi Indian Tribe
 Western National Parks Association
 Wild Land Trust
 Wilderness Society, California/Nevada Region
 Wilderness Watch
 The Wildlife Society
 Xolon Salinan Tribe

In addition, copies of the GMP were sent to various newspapers and other local media and news organizations.

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Amah Mutsun Tribal Chair Valentín López (left) and Ernie Salas of the Gabrieleño Band of Mission Indians share stories of condors and discuss the Mutsun/Gabrieleño link through the history of their ancestor, Toypurina – who is buried in the Mission San Juan Bautista. Photo by Chuck Striplen.



Team meetings and workshops. NPS photos.



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Appendices

Upper Condor Gulch from base of Fingers, Pinnacles National Monument. Photo by Gavin Emmons © 2011.

Appendices

A. LEGISLATION

B. CONSULTATION LETTERS

C. PRELIMINARY REPORT ON THE POTENTIAL FOR INCLUDING ROCK SPRINGS RANCH (RS-BAR) WITHIN PINNACLES NATIONAL MONUMENT

Appendix A. Legislative History

Proclamation of July 18, 1906

Established Pinnacles Forest Reserve, comprising 14,080 acres. The reserve was managed by the U.S. Forest Service.

A PROCLAMATION

WHEREAS, it is provided by section twenty-four of the Act of Congress, approved March third, eighteen hundred and ninety-one, entitled, "An act to repeal timber-culture laws, and for other purposes", "That the President of the United States may, from time to time, set apart and reserve, in any State or Territory having public land bearing forests, in any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof";

And whereas, the public lands, in the State of California, which are hereinafter indicated, are in part covered with timber and undergrowth, and it appears that the public good would be promoted by setting apart said lands as a public reservation;

Now, therefore, I, THEODORE ROOSEVELT, President of the United States of America, by virtue of the power in me vested by section twenty-four of the aforesaid Act of Congress, do proclaim that there are hereby reserved from entry or settlement and set apart as a Public Reservation, for the use and benefit of the people, all the tracts of land, in the State of California, shown as the Pinnacles Forest Reserve on the diagram forming a part hereof;

Excepting from the force and effect of this proclamation all lands which may have been, prior to the date hereof, embraced in any legal entry or covered by any lawful filing duly of record in the proper United States Land Office, or upon which any valid settlement has been made pursuant to law, and the statutory period within which to make entry or filing of record has not expired: Provided, that this exception shall not continue to apply to any particular tract of land unless the entryman, settler, or claimant continues to comply with the law under which the entry, filing, or settlement was made.

Warning is hereby expressly given to all persons not to make settlement upon the lands reserved by this proclamation.

In Witness Whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 18th day of July, in the year of our Lord one thousand nine hundred and six, and of the Independence of the United States the one hundred and thirty first.

THEODORE ROOSEVELT

By the President:
ROBERT BACON,
Acting Secretary of State

Proclamation No. 796, January 16, 1908 (35 Stat. 2177)

Established Pinnacles National Monument, comprising approximately 2,080 acres within existing Pinnacles Forest Reserve.

A PROCLAMATION

WHEREAS, the natural formations, known as the Pinnacles Rocks, with a series of caves underlying them, which are situated upon public lands, within the Pinnacles National Forest, in the State of California, are of scientific interest, and it appears that the public interests would be promoted by reserving these formations and caves as a National Monument, with as much land as may be necessary for the proper protection thereof;

Now, THEREFORE, I, Theodore Roosevelt, President of the United States of America, by virtue of the power in me vested by section two of the Act of Congress, approved June eighth, nineteen hundred and six entitled, "AN ACT For the preservation of American antiquities," do proclaim that there are hereby reserved from appropriation use of all kinds under all of the public land laws, subject to all prior valid adverse claims, and set apart as National Monument, all the tracts of land, in the State of California, shown as the Pinnacles National Monument on the diagram forming a part hereof.

The reservation made by this proclamation is not intended to prevent the use of the lands for forest purposes under the proclamation establishing the Pinnacles National Forest, but the two reservations shall both be effective on the land withdrawn but the National Monument hereby established shall be the dominant reservation.

Warning is hereby given to all unauthorized persons not to appropriate, injure or destroy any feature of this National Monument or to locate or settle upon any of the lands reserved by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 16th day of January, in the year of our Lord one thousand nine hundred and eight, and of the Independence of the United States the one hundred and thirty- second.

THEODORE ROOSEVELT.

By the President:
ELIHU ROOT,
Secretary of State.

Organic Act of August 25, 1916 (39 Stat. 535) to establish the National Park Service

Congress assigned to this new agency the administration of all the national parks and most of the national monuments already established. The administration of Pinnacles National Monument was among these monuments transferred to the National Park Service.

Proclamation No. 1660, May 7, 1923 (43 Stat. 1911)

Added approximately 562 acres to Pinnacles National Monument. The monument now totaled approximately 2,642 acres.

A PROCLAMATION

WHEREAS, it appears that the public good will be promoted by adding to the Pinnacles National Monument certain lands in the State of California, containing natural formations, known as Pinnacle Rocks, with a series of caves underlying them;

Now, THEREFORE, I, Warren G. Harding, President of the United States of America, by virtue of the power in me vested by section two of the act of Congress entitled, "An Act for the Preservation of American Antiquities," approved June 8, 1906 (34 Stat., 225) do proclaim that said lands, to-wit, the tracts described as lot 4, SW $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ Sec. 2, and W $\frac{1}{2}$ Sec. 11, in T. 17 S., R. 7 E., Mount Diablo Base and Meridian, are hereby reserved from appropriation and use of all kinds under the public land laws, subject to all prior valid claims, and set apart as an addition to the Pinnacles National Monument, and that the boundaries of the said National Monument are now as shown on the diagram hereto annexed and forming it part hereof.

Warning is hereby given to all unauthorized persons not to appropriate or injure any natural feature of this Monument or to occupy, exploit, settle, or locate upon any of the lands reserved by this proclamation.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this Monument, as provided in the act of Congress entitled, "An Act to establish a National Park Service, and for other purposes," approved August 25, 1916 (39 Stat., 535) as amended June 2, 1920 (41 Stat., 732).

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this seventh day of May, in the year of our Lord one thousand nine hundred and twenty-three, and of the Independence of the United States of America the one hundred and forty-seventh.

WARREN G. HARDING.

By the President:
CHARLES E. HUGHES,
Secretary of State.

Proclamation No. 1704, July 1924 (43 Stat. 1961)

Added approximately 326 acres to Pinnacles National Monument. The monument now totaled approximately 2,968 acres.

A PROCLAMATION

WHEREAS, it appears that the public interest would be promoted by adding to the Pinnacles National Monument in the State of California, certain adjoining lands on which are located a spring of water and valuable camping sites.

Now, THEREFORE, I, Calvin Coolidge, President of the United States of America, by authority of the power in me vested by section two of the act of Congress entitled, "An Act for the Preservation of American antiquities", approved June eighth, nineteen hundred and six (34 Stat., 225) do proclaim that the E 1/2 of Section 4, in T. 17 S., R. 7 E., Mount Diablo Meridian, is hereby reserved from all forms of appropriation under the public land laws, subject to all valid existing claims, and set apart as an addition to the Pinnacles National Monument and that the boundaries of the said National Monument are now as shown on the diagram hereto annexed and made a part hereof.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy or remove any feature of this Monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this Monument as provided in the Act of Congress entitled, "An act to establish a National Park Service and for other purposes," approved August twenty-fifth, nineteen hundred and sixteen (39 Stat., 535) and Acts additional thereto or amendatory thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE in the city of Washington this 2nd day of July in the year of our Lord one thousand nine hundred and twenty-four and of the year of the Independence of the United States of America the one hundred and forty-eighth.

CALVIN COOLIDGE

By the President:
CHARLES E. HUGHES,
Secretary of State

Proclamation No. 1948, April 13, 1931 (47 Stat. 2451)

Added approximately 1,926 acres to Pinnacles National Monument. The monument now totaled approximately 4,894 acres.

A PROCLAMATION

Whereas the county of San Benito, in the State of California, did on the 10th day of March, 1931, pursuant to the act of Congress entitled "An act for the preservation of American antiquities," approved June 8, 1906 (34 Stat., 225), by warranty deed of relinquishment and conveyance, properly executed in writing and acknowledged, relinquish, remise, and convey to the United States of America, for addition to the Pinnacles National Monument, Calif., all its right, title, and interest in the following described land:

MOUNT DIABLO MERIDIAN

T. 16 S., R. 7 E., SE. $\frac{1}{4}$, S. $\frac{1}{2}$ SW. $\frac{1}{4}$ sec. 26, S. $\frac{1}{2}$ S. $\frac{1}{2}$ sec. 27, SE. $\frac{1}{4}$ sec. 28, W. $\frac{1}{2}$ E. $\frac{1}{2}$, SE. $\frac{1}{4}$ NW. $\frac{1}{4}$, E. $\frac{1}{2}$ SW. $\frac{1}{4}$, SW. $\frac{1}{4}$ sec. 33, and sec. 35;

T. 17 S., R. 7 E., lot 4, S. $\frac{1}{2}$ NW. $\frac{1}{4}$, NE. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 1, lots 1, 2, and 3, and S. $\frac{1}{2}$ NE $\frac{1}{4}$, SE. $\frac{1}{4}$ NW. $\frac{1}{2}$ sec. 2, containing 1,926.35 acres; and

WHEREAS said relinquishment and conveyance has been accepted by the Secretary of the Interior in the manner and for the purposes described in said act of Congress; and

WHEREAS it appears that the public interest would be promoted by adding to the Pinnacles National Monument, in the State of California, all the lands hereinabove described for the purpose of including within said monument certain additional features of scientific and educational interest and for administrative purposes;

Now, THEREFORE, I, Herbert Hoover, President of the United States of America, by virtue of the power vested in me by section 2 of the said act of Congress, do proclaim that said lands hereinabove described are hereby added to and made a part of the Pinnacles National Monument.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this monument as provided in the act of Congress entitled «An act to establish a National Park Service, and for other purposes,» approved August 25, 1916 (39 Stat. 535), and acts additional thereto or amendatory thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 13th day of April, in the year of our Lord nineteen hundred and thirty-one, and of the Independence of the United States of America the one hundred and fifty-fifth.

HERBERT HOOVER.

By the President:
HENRY L. STIMSON,
Secretary of State.

Proclamation No. 2050, July 11, 1933 (48 Stat. 1701)

Added approximately 5,322 acres to Pinnacles National Monument. The monument now totaled approximately 10,216 acres.

A PROCLAMATION

WHEREAS it appears that the public interest would be promoted by adding to the Pinnacles National Monument, California, certain adjoining land for the purpose of including within said monument additional lands on which there are located features of scientific interest and for administration purposes,

Now, THEREFORE, I, Franklin D. Roosevelt, President of the United States of America, by virtue of the power in me vested by section 2 of the act of Congress entitled "AN ACT For the preservation of American antiquities, approved June 8, 1906 (34 Stat. 225), do proclaim that, subject to all valid existing rights, the following-described lands in California be, and the same are hereby, added to and made a part of the Pinnacles National Monument:

MOUNT DIABLO MERIDIAN

T. 16 S., R. 7 E., sec. 25, W. $\frac{1}{2}$;
sec. 26 NE. $\frac{1}{4}$;
sec 32, N. $\frac{1}{2}$ NW. $\frac{1}{4}$, SW. $\frac{1}{4}$ NW. $\frac{1}{4}$, and NW. $\frac{1}{4}$ SW. $\frac{1}{4}$;
sec. 36, W. $\frac{1}{2}$
T. 17 S., R. 7 E., sec. 1, lots 2, 3, NW. $\frac{1}{4}$ SW. $\frac{1}{4}$ and S. $\frac{1}{2}$ SW. $\frac{1}{4}$;
sec. 2, SE. $\frac{1}{2}$;
sec. 11, E. $\frac{1}{2}$;
sec. 12, W. $\frac{1}{2}$;
sec. 13, W. $\frac{1}{2}$;
sec. 14, all;
sec. 15, NE. $\frac{1}{4}$, E. $\frac{1}{2}$ NW. $\frac{1}{4}$, E. $\frac{1}{2}$ SW. $\frac{1}{4}$, and SE. $\frac{1}{4}$;
sec. 22, all;
sec. 23, all;
sec. 24, W. $\frac{1}{2}$.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this monument, as provided in the act of Congress entitled «AN ACT To establish a National Park Service, and for other purposes», approved August 25, 1916 (39 Stat. 535-536), and acts additional thereto or amendatory thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 11 day of July, in the year of our Lord nineteen hundred and thirty-three, and of the Independence of the United States of America the one hundred and fifty-eighth.

FRANKLIN D. ROOSEVELT.

By the President:
WILLIAM PHILLIPS,
Acting Secretary of State.

Proclamation No. 2528, December 5, 1941 (55 Stat. 1709)

Added approximately 4,300 acres to Pinnacles National Monument. The monument now totaled approximately 14,516 acres.

A PROCLAMATION

WHEREAS it appears that certain lands adjoining the Pinnacles National Monument in California are required for the proper care, management and protection of the objects of scientific interest situated on lands within the said monument; and

WHEREAS it appears that it would be in the public interest to reserve such lands as an addition to said monument:

Now, THEREFORE, I, Franklin D. Roosevelt, President of the United States of America, under and by virtue of the authority vested in me by the act of June 8, 1906 (ch. 3060, 34 Stat. 225; U. S. C., title 16, sec. 431), do proclaim that, subject to all valid existing rights, the following-described lands in California are hereby added to and made a part of the Pinnacles National Monument:

MOUNT DIARLO MERIDIAN

T.16 S., R.7 E., sec.20, E. $\frac{1}{2}$;
 secs. 21 to 23, inclusive;
 sec. 24, W. $\frac{1}{2}$;
 sec. 26, NW. $\frac{1}{4}$; N. $\frac{1}{2}$ SW. $\frac{1}{4}$;
 sec. 27, N. $\frac{1}{2}$, N. $\frac{1}{2}$ S. $\frac{1}{2}$;
 sec. 28, N. $\frac{1}{2}$, SW. $\frac{1}{4}$;
 sec. 29 $\frac{1}{2}$,
T.17 S., R.7 E., sec. 1 SW. $\frac{1}{4}$ SE. $\frac{1}{4}$;
 sec. 12, W. $\frac{1}{2}$ E. $\frac{1}{2}$, SE. $\frac{1}{4}$ SE. $\frac{1}{4}$;
 sec. 13, W. $\frac{1}{2}$ E. $\frac{1}{2}$, SE. $\frac{1}{4}$ SE. $\frac{1}{4}$;
T.17 S., R. 8 E., sec. 7, Lot 13;
 sec. 18, Lot 1;

containing 4,589.26 acres.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

The reservation made by this proclamation supersedes as to any of the above-described lands affected thereby the temporary withdrawals made by Executive Orders No. 5038 of February 2, 1929 and No. 6910 of November 26, 1934, as amended.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision,, management, and control of this monument as provided in the act of Congress entitled «An Act

To establish a National Park Service, and for other purposes,» approved August 25, 1916 (ch. 408, 39 Stat. 535; U.S. C., title 16, sees. 1 and 2), and acts supplementary thereto or amendatory thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 5th day of December, in the year of our Lord nineteen hundred and forty-one and of the Independence of the United States of America the one hundred and sixty-sixth.

FRANKILIN D. ROOSEVELT.

By the President:
CORDELL HULL,
Secretary of State.

Public Law 94-567, October 20, 1976 (90 Stat. 2692)

Designated 12,952 acres of land within Pinnacles National Monument as wilderness and 990 acres as potential wilderness. Also added approximately 1,717.9 acres to the monument, and declared that the monument's total area shall not exceed 16,500 acres. The monument now totals approximately 16,234 acres.

To designate certain lands within units of the National Park Service as wilderness; to revise the boundaries of certain of those units; and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in accordance with section 8(c) of the Wilderness Act (78 Stat 890; 16 U.S.C.

1132 (c)), the following lands are hereby designated as wilderness, and shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act:

... (i) Pinnacles National Monument, California, wilderness comprising twelve thousand nine hundred and fifty-two acres, and potential National wilderness additions comprising nine hundred and ninety acres, depicted on a map entitled Wilderness Plan, Pinnacles National Monument, California”, numbered 114-20,010-D) and dated September 1975, to be known as the Pinnacles Wilderness...

SEC. 2. A map and description of the boundaries of the areas designated in this Act shall be on file and available for public inspection in the office of the Director of the National Park Service, Department of the Interior, and in the office of the Superintendent of each area designated in the Act. As soon as practicable after this Act takes effect, maps of the wilderness areas and descriptions of their boundaries shall be filed with the Interior and Insular Affairs Committees of the United States Senate and House of Representatives, and such maps and descriptions shall have the same force and effect as if included in this Act: Provided, That correction of clerical and typographical errors in such maps and descriptions may be made.

SEC. 3. All lands which represent potential wilderness additions, upon publication in the Federal Register of a notice by the Secretary of the Interior that all uses thereon prohibited by the Wilderness Act have ceased, shall thereby be designated wilderness.

SEC. 4. The boundaries of the following areas are hereby revised, and those lands depicted on the respective maps as wilderness or as potential wilderness addition are hereby so designated at such time and in such manner as provided for by this Act:

Sec. 5. (a) The Secretary of Agriculture shall, within two years after the date of enactment of this Act, review, as to its suitability or unsuitability for preservation as wilderness, the area comprising approximately sixty-two thousand nine hundred and thirty acres located in the Coronado National Forest adjacent to Saguaro National Monument, Arizona, and identified on the map referred to in section

1(j) of this Act as the “Rincon Wilderness Study Area,” and shall report his findings to the President. The Secretary of Agriculture shall conduct his review in accordance with the provisions of subsections 3(b) and 3(d) of the Wilderness Act, except that any reference in such subsections to areas in the national forests classified as “primitive” on the effective date of that Act shall be deemed to be a reference to the wilderness study area designated by this Act and except that the President shall advise the Congress of his recommendations with respect to this area within two years after the date of enactment of this Act.

(b) The Secretary of Agriculture shall give at least sixty days' advance public notice of any hearing or other public meeting relating to the review provided for by this section.

SEC. 6. The areas designated by this Act as wilderness shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act governing areas designated by that Act as wilderness areas, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act, and, where appropriate, any reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

SEC. 7. (a) Section 6(a) of the Act of September 13, 1962 (76 Stat. 538), as amended (16 U.S.C. 459c-6a) is amended by inserting “without impairment of its natural values, in a manner which provides for such recreational, educational, historic preservation interpretation, and scientific research opportunities as are consistent with, based upon, and supportive of the maximum protection, restoration and preservation of the natural environment with the area” immediately after “shall be administered by the Secretary.”...

...SEC. 8. The boundaries of the Isle Royale National Park are hereby extended to include any submerged lands within the territorial jurisdiction of the United States within four and one-half miles of the shoreline of Isle Royale and the surrounding islands, including Passage Island and the Gull Islands, and the Secretary of the Interior is hereby authorized, in his discretion, to acquire title by donation to any such lands not now owned by the United States, the title to be satisfactory to him,

(b) Pinnacles National Monument, California:

(1) The boundary is hereby revised by adding the following described lands, totaling approximately one thousand seven hundred and seventeen and nine-tenths acres:

(a) Mount Diablo meridian, township 16 south, range 7 east: Section 1, east half east half, southwest quarter northeast quarter, and northwest quarter southeast quarter; section 12, east half northeast quarter, and northeast quarter southeast quarter; section 13, east half northeast quarter and northeast quarter southeast quarter.

(b) Township 16 south, range 7 east: Section 82, east half.

(c) Township 17 south, range 7 east: Section 4, west half; section 5, east half.

(d) Township 17 south, range 7 east: Section 6, southwest quarter southwest quarter; section 7, northwest quarter north half southwest quarter.

(2) The Secretary of the Interior may make minor revisions in the monument boundary from time to time “by publication in the Federal Register of a map or other boundary description, but the total area within the monument may not exceed sixteen thousand five hundred acres: Provided, however; That lands designated as wilderness pursuant to this Act may not be excluded from the monument. The monument shall hereafter be administered in accordance with the Act of August 25, 1916 (39 Stat 535; 16 U.S.C. I et. seq.), as amended and supplemented.

(3) In order to effectuate the purposes of this subsection, the Secretary of the Interior is authorized to acquire by donation, purchase, transfer from any other Federal agency or exchange, lands and interests therein within the area hereafter encompassed by the monument boundary except that property owned by the State of California or any political subdivision thereof may be acquired only by donation.

(4) There are authorized to be appropriated, in addition to such sums as may heretofore have been appropriated, not to exceed \$955,000 for the acquisition of lands or interests in lands authorized by this subsection. No funds authorized to be appropriated pursuant to this Act shall be available prior to October 1, 1977.

Public Law 96-344, September 8, 1980 (94 Stat. 1133)

Authorized minor boundary change along southeast edge of monument to adjust fence line on Chalone Creek. Approximately 3.35 acres were removed from the monument, while approximately 44.02 acres were added. The monument now totaled approximately 16,275 acres.

An Act

To improve the administration of the Historic Sites, Buildings and Antiquities Act of 1935 (49 Stat. 666).

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SEC. 6. Subsection 4(b) of the Act entitled “An Act to designate certain lands within units of the National Park System as wilderness; to revise the boundaries of certain of those units; and for other purposes”, approved October 20, 1976 (90 Stat. 2692, 2694), is amended by revising the proviso to the first sentence in paragraph

(2) to read as follows: “*Provided, however,* That, except for not more than approximately three and thirty-five one-hundredths acres designated herein as wilderness and approximately eleven and thirteen one-hundredths acres designated herein as potential wilderness additions, which may be excluded pursuant to an exchange consummated in accordance with paragraph (3) of this subsection, lands designated as wilderness pursuant to this Act may not be excluded from the monument.”.

Proclamation No. 7266, January 11, 2000 (65 F.R. 2831-32)

Authorized expansion of monument to include approximately 10,939 additional acres (thereby rendering moot the acreage limitation established by P.L. 94-567 in 1976). Approximately 8,008 acres were federal lands transferred from the Bureau of Land Management, while the remaining 2,931 acres were privately owned. As of 2011, Pinnacles National Monument totals approximately 26,534 acres with legislative boundaries comprising a total area of approximately 27,214 acres.

A Proclamation

Pinnacles National Monument was established on January 16, 1908, for the purpose of protecting its natural rock formations, known as Pinnacles Rocks, and the series of talus caves underlying them. The monument sits within one of the most complex and fascinating geologic terrains in North America, an area where rock masses have been sliced apart, transported for up to hundreds of miles, and then reassembled into a fantastic geologic mixture. The Monument holds only half of an ancient volcano; the other half is found 195 miles to the southeast in northern Los Angeles County. The volcano was split apart and transported north by an early strand of the San Andreas Fault, known as the Chalone Creek Fault, which lies within the monument. The pinnacles inside the monument are composed mainly of volcanic breccia, a mixture of angular blocks of volcanic lava, pumice, and ash. The occurrence of the pinnacles within the monument is unusual, as some of these volcanic rocks also contain marine fossils.

Since 1908, the boundaries of the monument have been enlarged on five occasions by presidential proclamations issued pursuant to the Antiquities Act (34 Stat. 225, 16 U.S.C. 431). Proclamation 1660 of May 7, 1923, added 562 acres to include additional natural formations with a series of caves underlying them. Proclamation 1704 of July 2, 1924, added adjoining lands that included a spring of water and valuable camping sites. Proclamation 1948 of April 13, 1931, added 1,926 acres that held additional features of scientific and educational interest and for administrative purposes. For these same purposes, the boundary was later expanded on July 11, 1933 (Proclamation 2050). Proclamation 2528 of December 5, 1941, added additional lands adjoining Pinnacles National Monument in order to protect more objects of scientific interest in the monument area. The boundary of the monument was further expanded by statute on October 20, 1976 (Public Law 94-567, 90 Stat., 2693).

The boundary enlargement affected by this proclamation is central to the continued preservation of the Pinnacles National Monument's unique resources. In addition to containing pieces of the same faults that created the tremendous geological formations throughout the monument, the expansion lands hold part of the headwaters that drain into the basin of the monument. Over millions of years, flash floods and stream currents have helped to sculpt the land's natural features. Additionally, these lands contain a biological system that must be protected if the wild character and ecosystem of the monument are to be preserved. The geologic formations provide a stellar habitat for important and sometimes fragile biological resources. For example, raptor populations, including prairie falcons, golden eagles, red-shouldered hawks, Cooper's hawks, harriers, white-tailed kites, long-eared owls, and red-tailed hawks, nest on the rocky formations and forage in the broad watershed. The lands within the expansion area contain steep, rugged slopes surrounding small canyons. Shallow rocky soils, gravel creek beds, and steeply rising topography combine to create a dynamic flood environment. The lands preserve a complex association of plant communities characteristic of the chaparral. Along the watercourses, live-oaks, buckeyes, and sycamore grow. Blue oak woodlands and grasslands occur on the deepest soils. Creeks that flow in and out of the existing monument and the expansion lands provide highly valuable riparian habitat for wildlife. The western pond turtle, two-striped garter snake, silvery legless lizard, threatened California red-legged frog, and California horned lizard inhabit these lands. By expanding the monument, these unique biological resources can be afforded more complete protection to maintain and enhance the ecosystems of the monument.

Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431) authorizes the President, in his discretion/ to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

WHEREAS it appears that it would be in the public interest to reserve such lands as an addition to the Pinnacles National Monument;

NOW, THEREFORE, I, WILLIAM J. CLINTON, President of the United States of America, by the authority vested in me by section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), do proclaim that there are hereby set apart and reserved as an addition to the Pinnacles National Monument, for the purpose of care, management, and protection of the objects of scientific interest situated on lands within the said monument, all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled “Pinnacles National Monument Boundary Enlargement” attached to and forming a part of this proclamation. The Federal land and interests inland reserved consist of approximately 7,900 acres, which is the smallest area compatible with the proper care and management of the objects to be protected.

The enlargement of this monument is subject to valid existing rights.

All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing/ other than by exchange that furthers the protective purposes of the monument. Lands and interests in lands not owned by the United States shall be reserved as a part of the monument upon acquisition of title thereto by the United States.

There is hereby reserved, as of the date of this proclamation and subject to valid existing rights, a quantity of water sufficient to fulfill the purposes for which the monument is established. Nothing in this reservation shall be construed as a relinquishment or reduction of any water use or rights reserved or appropriated by the United States on or before the date of this proclamation.

The Secretary of the Interior shall manage the area being added to the monument through the National Park Service, under the same laws and regulations that apply to the rest of the monument, except that livestock grazing may be permitted in the area added by this proclamation.

Wilderness Study Areas included in the monument will continue to be managed under section 403 (c) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.).

Nothing in this proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the national monument shall be the dominant reservation.

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove, any feature of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this eleventh day of January, in the year of our Lord two thousand, and of the Independence of the United States of America the two hundred and twentieth.

WILLIAM J. CLINTON

Big Sur Wilderness and Conservation Act of 2002 Public Law 107-370,107th Congress

Designated approximately 2,715 acres of land within Pinnacles National Monument as wilderness.

An Act

To designate certain lands in the State of California as components of the National Wilderness Preservation System, and for other purposes.

H.R. 4750

SECTION 1. SHORT TITLE AND DEFINITIONS.

(a) Short Title.--This Act may be cited as the “Big Sur Wilderness and Conservation Act of 2002”.

(b) Definitions.--As used in this Act, the term “Secretary” means the Secretary of the Interior or the Secretary of Agriculture, as appropriate.

SEC. 2. ADDITIONS TO THE WILDERNESS PRESERVATION SYSTEM.

(c) Additions to Pinnacles Wilderness.--

<<NOTE: 16 USC 1132 note.>>

(1) In general.--The areas described in paragraph (2)--

- A. are hereby designated as wilderness and, therefore, as components of the National Wilderness Preservation System; and
- B. are hereby incorporated in and shall be deemed to be a part of the Pinnacles Wilderness designated by Public Law 94-567.

(2) Areas described.--The areas referred to in paragraph (1) are the lands in the State of California administered by the National Park Service which comprise approximately 2,715 acres, as generally depicted on a map entitled “Pinnacles Proposed Wilderness Additions” and dated October 30, 2001.

(d) Maps and Descriptions.--

(1) Filing.--As soon as practicable after the date of enactment of this Act, the appropriate Secretary shall file a map and a boundary description of each area designated as wilderness by this Act with the Committee on Resources of the House of Representatives and the Committee on Energy and Natural Resources of the Senate.

(2) Effect.--Each map and description shall have the same force and effect as if included in this Act, except that the appropriate Secretary is authorized to correct clerical and typographical errors in such boundary descriptions and maps.

(3) Availability.--Such maps and boundary descriptions shall be on file and available for public inspection in the Office of the Director of the Bureau of Land Management and in the Office of the Chief of the Forest Service, as appropriate.

(e) State and Private Lands.--Lands within the exterior boundaries of any area added to a wilderness area under this section that are owned by the State or by a private entity shall be included within such wilderness area if such lands are acquired by the United States. Such lands may be acquired by the United States only as provided in the Wilderness Act (16 U.S.C. 1131 and following).

SEC. 3. ADMINISTRATIVE PROVISIONS.

(a) In General.--Subject to valid existing rights, lands designated as wilderness by this Act shall be managed by the Secretary of Agriculture or the Secretary of the Interior, as appropriate, in accordance with the Wilderness Act (16 U.S.C. 1131 et seq.) and this Act, except that, with respect to any wilderness areas designated by this Act, any reference in the Wilderness Act to the effective date of the Wilderness Act shall be deemed to be a reference to the date of enactment of this Act.

(b) Grazing.--Grazing of livestock in wilderness areas designated by this Act shall be administered in accordance with the provisions of section 4(d)(4) of the Wilderness Act (16 U.S.C. 1133(d)(4)), as further interpreted by section 108 of Public Law 96-560, and, the guidelines set forth in Appendix A of House Report 101-405 of the 101st Congress.

(c) State Jurisdiction.--As provided in section 4(d)(7) of the Wilderness Act (16 U.S.C. 1133(d)(7)), nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of the State of California with respect to wildlife and fish in California.

(d) Water.--

(1) Reservation of water.--With respect to each wilderness area designated by this Act, Congress hereby reserves a quantity of water sufficient to fulfill the purposes of this Act. The priority date of such reserved rights shall be the date of enactment of this Act.

(2) Requirement to protect rights.--The appropriate Secretary and all other officers of the United States shall take steps necessary to protect the rights reserved by paragraph (1), including the filing by the Secretary of a claim for the quantification of such rights in any present or future appropriate stream adjudication in the courts of the State of California in which the United States is or may be joined and which is conducted in accordance with the McCarran Amendment (43 U.S.C. 666).

(3) No reduction or relinquishment.--Nothing in this Act shall be construed as a relinquishment or reduction of any water rights reserved or appropriated by the United States in the State of California on or before the date of enactment of this Act.

(4) Limitation on effect.--The Federal water rights reserved by this Act are specific to the wilderness areas located in the State of California designated by this Act. Nothing in this Act related to reserved Federal water rights shall be construed as establishing a precedent with regard to any future designations, nor shall it constitute an interpretation of any other Act or any designation made pursuant thereto.

SEC. 4. WILDERNESS FIRE MANAGEMENT.

(a) <<NOTE: Deadline.>> Revision of Management Plans.--The Secretary of Agriculture shall, by not later than 1 year after the date of the enactment of this Act, amend the management plans that apply to each of the Ventana Wilderness and the Silver Peak Wilderness, respectively, to authorize the Forest Supervisor of the Los Padres National Forest to take whatever appropriate actions in such wilderness areas are necessary for fire prevention and watershed protection consistent with wilderness values, including best management practices for fire presuppression and fire suppression measures and techniques.

(b) Incorporation Into Forest Planning.--Any special provisions contained in the management plan for the Ventana Wilderness and Silver Peak Wilderness pursuant to subsection (a) shall be incorporated into the management plan for the Los Padres National Forest.

Approved December 19, 2002.

Appendix B. Consultation Letters



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Pinnacles National Monument

5000 Highway 146

Paicines, California 95043-9770

March 25, 2008

Milford Wayne Donaldson
State Historic Preservation Officer
1416 9th Street, Room 1442-7
Sacramento, CA 95814
P.O. Box 942896
Sacramento, CA 94296-0001

Dear Mr. Donaldson,

In accordance with our responsibilities under the National Historic Preservation Act of 1966 and the amended Programmatic Agreement between the National Park Service, the National Conference of State Historic Preservation Offices, and the Advisory Council on Historic Preservation, this letter is to inform you of the National Park Service's intent to prepare a General Management Plan (GMP) and Environmental Impact Statement (EIS) for Pinnacles National Monument.

The GMP will set forth the basic management philosophy for the park and will provide strategies for addressing issues relevant to natural and cultural resources management, visitor use, and interpretation of those resources. We invite your office to attend meetings of the planning team preparing the GMP.

The NPS held public scoping meetings in communities near the monument during March 2007. The public scoping comment period came to a close on May 31, 2007. Our team will be developing management alternatives through much of 2008. Current information relevant to the GMP is available on the National Park Service Planning, Environment and Public Comment (PEPC) website located at <http://parkplanning.nps.gov/pinn>.

We encourage your involvement in this important planning process. If you have any questions please do not hesitate to contact Denise Louie, our Chief of Research and Resource Management 831-389-4486 x222 or Martha Crusius, GMP Project Manager, at 510-817-1447. We look forward to working with you and your staff on this endeavor.

Sincerely,

Eric Brunnemann, Superintendent
Pinnacles National Monument



United States Department of the Interior

NATIONAL PARK SERVICE
Pinnacles National Monument
5000 Highway 146
Paicines, California 95043-9770

IN REPLY REFER TO:

March 25, 2008

Jacob Martin
U.S. Fish & Wildlife Service
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 930030

Dear Mr. Martin:

In accordance with our responsibilities under Section 7 of the Endangered Species Act, this letter is to inform you of the National Park Service's intent to prepare a General Management Plan (GMP) and Environmental Impact Statement (EIS) for Pinnacles National Monument.

A new GMP is scheduled to be completed in 2009 and will set forth the basic management philosophy for the park and will provide strategies for addressing issues relevant to natural and cultural resources management, visitor use, and interpretation of those resources. The Monument is located in San Benito and Monterey Counties in California, and we are interested in obtaining a list of U.S. Fish and Wildlife Service (USFWS) listed, proposed, and candidate species that may occur in this area. Pinnacles National Monument held public scoping meetings for the GMP in surrounding communities in March 2007. The public scoping comment period came to a close on May 31, 2007. Our team will be developing management alternatives through much of 2008. Current information relevant to the GMP is available on the National Park Service Planning, Environment and Public Comment (PEPC) website located at <http://parkplanning.nps.gov/pinn>.

If you have any questions please do not hesitate to contact Denise Louie (Chief of Research and Resource Management) at 831-389-4486 x 222 or Martha Crusius, GMP Project Manager, at 510-817-1447. We look forward to working with you and your staff on this endeavor.

Sincerely,

Eric Brunnemann, Superintendent
Pinnacles National Monument

Appendix C. Preliminary Report on the Potential for Including Rock Springs Ranch Within Pinnacles National Monument

Introduction

On June 18, 2010, Congressman Sam Farr of California (D-17th) requested that the National Park Service (NPS) conduct a reconnaissance survey of the Rock Springs Ranch property (RS-Bar), California, to evaluate the unique geological, historical, archeological, and natural resources for potential addition to Pinnacles National Monument.

Pinnacles National Monument is in the process of developing a new general management plan (GMP) to guide the future of the national monument. One of the legislative requirements of a GMP is to identify potential modifications to the external boundaries of the park and the reason for any proposed changes. NPS therefore agreed to analyze Rock Springs Ranch as a potential addition to the park boundary in the context of the park's GMP. This preliminary report summarizes that analysis and the information that will be included in the draft GMP.

The NPS has established criteria by which to evaluate potential additions to existing park boundaries, and different criteria by which to evaluate areas proposed as potential new national park units. This analysis of Rock Springs Ranch fits neither set of criteria perfectly, as the resources and opportunities at Rock Springs Ranch extend beyond the existing purpose of Pinnacles National Monument, and Congressman Farr's request did not suggest that Rock Springs Ranch be designated as a separate park unit. These criteria, however, enable us to respond to Congressman Farr's request to evaluate the potential for the large and noncontiguous Rock Springs Ranch property to be added to Pinnacles National Monument.



Serpentine barrens. NPS photo.

A team of NPS staff from the Pacific West Region, Pinnacles National Monument, and Point Reyes National Seashore, and other scientists and resource experts from the Bureau of Land Management, U.S. Geological Survey, San Benito County Agricultural Commission, and the San Francisco Estuary Institute conducted a field visit to Rock Springs Ranch on September 27-28. The field visit was led by the ranch site manager. This report provides preliminary findings based on the field visit and limited documentation of resources at Rock Springs Ranch.

CRITERIA FOR INCLUSION IN THE NATIONAL PARK SYSTEM

Criteria articulated in NPS Management Policies are used to evaluate whether an area should be added to the National Park System. To be eligible for favorable consideration as a new, stand-alone unit of the National Park System, an area must:

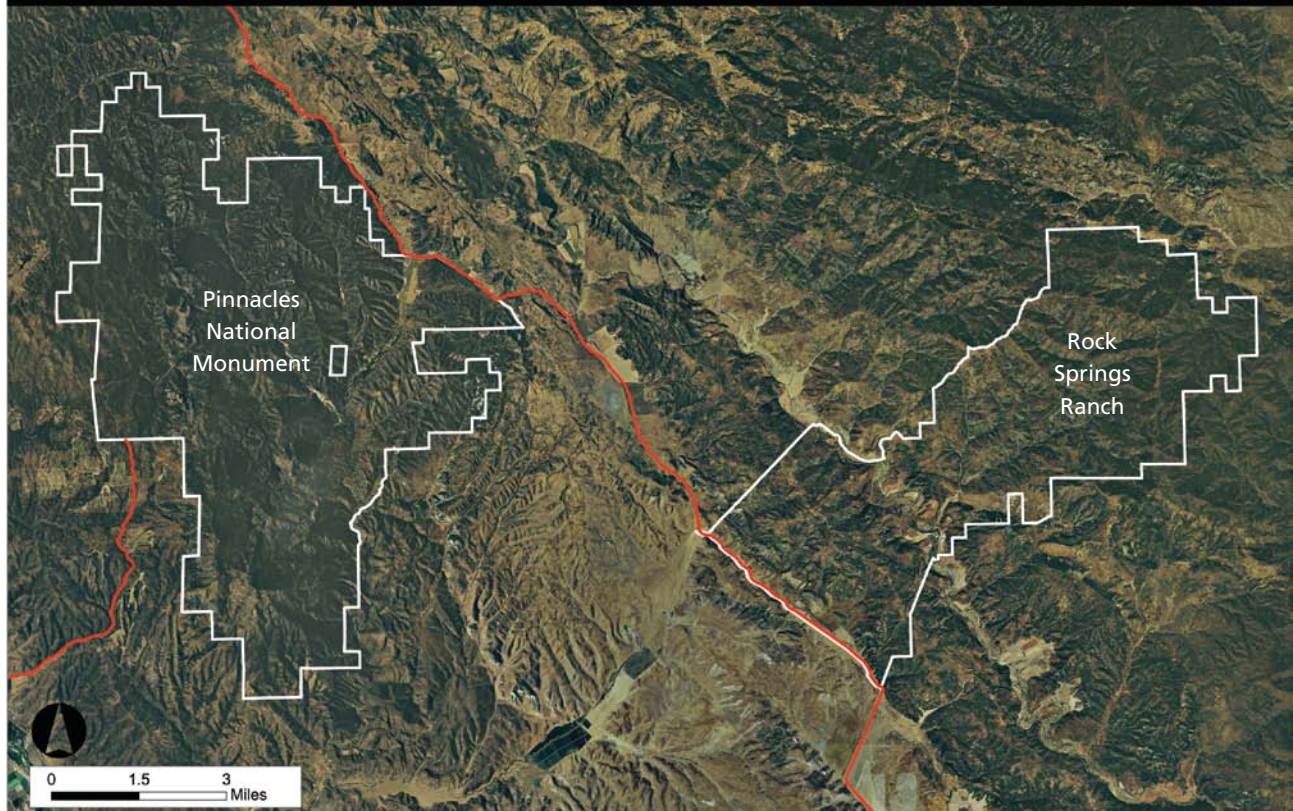
- possess nationally significant natural or cultural resources
- be a suitable addition to the system
- be a feasible addition to the system; and
- require direct NPS management instead of protection by some other governmental agency or the private sector.

Complete studies of potential new units must be authorized by Congress and signed into public law by the President. Therefore, only preliminary evaluation and findings are possible at this time.

The National Park Service has broad authority to study potential adjustments to the boundaries of existing parks, however, and does not need specific authority from Congress to evaluate boundary adjustments. Boundary adjustments may be recommended to:

- protect significant resources and values, or to enhance opportunities for public enjoyment related to park purposes;
- address operational and management issues, such as the need for access or the need for boundaries to correspond to logical boundary delineations such as topographic or other natural features or roads; or otherwise protect park resources that are critical to fulfilling park purposes.

All recommendations for boundary changes must also meet the following two criteria:



- The added lands will be feasible to administer considering their size, configuration, and ownership; costs; the views of and impacts on local communities and surrounding jurisdictions; and other factors such as the presence of hazardous substances or exotic species.
- Other alternatives for management and resource protection are not adequate.

Boundary adjustments are typically included in park management plans. Among the four requirements listed by Congress in the National Park and Recreation Act of 1978 for the preparation of a General Management Plan for park units is for the National Park Service to examine what modifications of external boundaries might be necessary to carry out park purposes. Public review of the draft General Management Plan for Pinnacles National Monument will provide an opportunity to obtain feedback on boundary issues and to finalize the NPS recommendation for Rock Springs Ranch. Any substantial boundary change that may be recommended in a National Park Service planning document must be either specifically authorized by Congress or designated as a National Monument through a Proclamation by the President of the United States under the authority of the 1906 Antiquities Act before an area can be added to a park.

LOCATION AND CURRENT USES AT ROCK SPRINGS RANCH

Rock Springs Ranch (RS-Bar) consists of approximately 18,200 acres. The ranch is about 4 miles east of Pinnacles National Monument. Both Rock Springs Ranch and Pinnacles National Monument are located in San Benito County while a small portion of the west side of Pinnacles is located in Monterey County. Access to Rock Springs Ranch is along its western border from State Highway 25 and to its ranch headquarters from Old Hernandez Road. Elevations range from 1,535 feet along the San Benito River to 4,033 feet at Rock Springs Peak. Approximately 4 miles of the San Benito River runs through the property generally parallel with the Old Hernandez Road.

Rock Springs Ranch is a privately-owned hunting club, providing guided hunts for its members. The ranch also has a pasture agreement with a tenant to graze cattle on 14,000-15,000 acres. The property is not available for general public use, except that facilities can be rented for special events including corporate events, family reunions, weddings and training seminars.

The property is zoned AR, or Agricultural Rangeland. The property is also subject to the provisions of and is in compliance with the state's Land Conservation

Agreement with the county through the Williamson Act. The Williamson Act provides property tax benefits to landowners who contract with the county to keep parcels in agricultural or related open space uses. A hunting preserve is a permitted use and is within the conditions of both the county zoning restrictions and the contract. The contract ordinarily runs with the land, but can be terminated when the land is acquired by a public agency.

Preliminary Evaluation of Resource Significance

INTRODUCTION

The National Park Service has adopted four criteria to evaluate the national significance of proposed areas. These criteria, listed in the NPS Management Policies, 2006, state that a resource is nationally significant if it meets all of the following conditions:

- It is an outstanding example of a particular type of resource.
- It possesses exceptional value or quality in illustrating or interpreting the natural or cultural themes of our nation's heritage.
- It offers superlative opportunities for public enjoyment or for scientific study.
- It retains a high degree of integrity as a true, accurate, and relatively unspoiled example of a resource.

National significance for cultural resources will be evaluated by applying the National Historic Landmarks (NHL) criteria contained in 36 CFR Part 65 (Code of Federal Regulations) (see Appendix B). Before resources can be designated as NHLs, they must be evaluated by the NPS's National Historic Landmark Survey, reviewed by the NPS Advisory Board, and recommended to the Secretary of the Interior.



Blue oak woodlands. NPS photo.

This preliminary resource assessment of Rock Springs Ranch is based on existing documentation, the study team site visit in September 2010, and discussions with local resource experts.

POTENTIALLY NATIONALLY SIGNIFICANT NATURAL AND CULTURAL RESOURCES

The study team identified the following resources as potentially nationally significant:

VEGETATION

Rock Springs Ranch includes excellent examples of intact native Central California vegetation, including extensive stands of blue oak woodland and savanna and other unique vegetation. The ranch has four uncommon vegetation types: extensive blue oak (*Quercus douglasii*) woodland at all seral stages, relatively intact native perennial grasslands (*Nassella cernua* or *N. lepida*), serpentine chaparral (leather oak, *Quercus durata*), and serpentine barrens/outcrop.

The quality and quantity of blue oak woodland and associated native perennial grasslands is exceptional for the region. All ages of blue oak are represented on the ranch, indicating that the species is regenerating and retains a high degree of integrity.

Some areas of serpentine soil on the ranch are judged to be high quality habitat for federally-listed Threatened San Benito evening primrose (*Camissonia benitensis*). A survey for this and other species during the growing season could be beneficial.

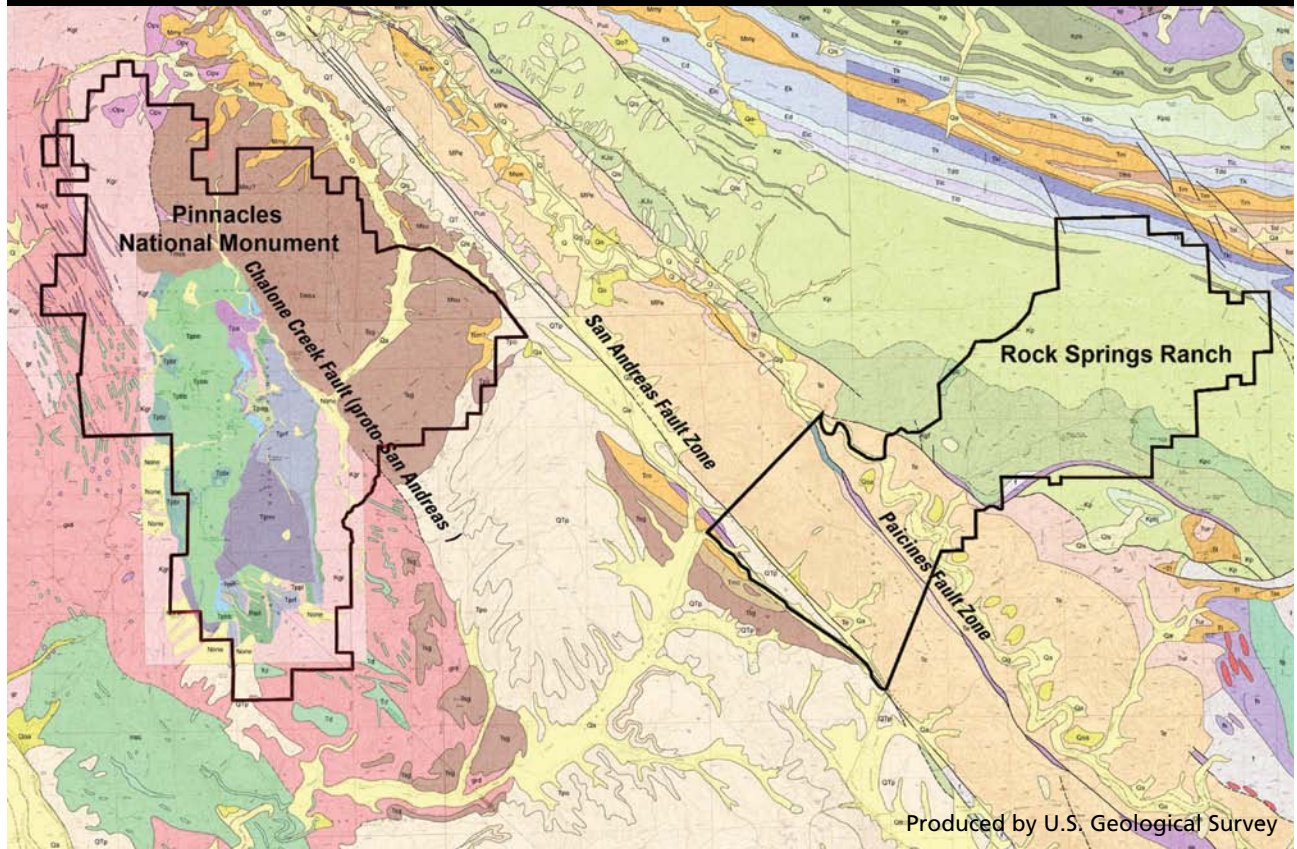
The conservation of the extensive stands of blue oak woodland, along with other chaparral and grassland communities, at Rock Springs Ranch would greatly expand protection of these plant communities, preserve their value in illustrating natural history themes related to forest, chaparral, and grassland ecosystems, and may provide superlative opportunities for public enjoyment and scientific study.

GEOLOGY

The geologic resources at Rock Springs, located on the other side of the San Andreas Fault, are different from the resources at Pinnacles National Monument. The Rock Springs Ranch geologic resources complement the Pinnacles National Monument geology story because they help to tell the story of plate tectonics. The eastern boundary of Pinnacles National Monument and the western boundary of Rock Springs Ranch include San Andreas Fault System resources.

The Rock Springs Ranch property includes “prime examples” of several geologic resources: the San Andreas Fault Zone in Little Rabbit Valley includes

Pinnacles National Monument and Rock Springs Ranch Geologic Map



excellent geomorphic expression of multiple active strands as well as well-exposed abandoned strands, illustrating the changing and complex nature of a major seismogenic fault; large landslides in the Devils Canyon area have classic geomorphic expression of rapid gravity driven mass-wasting and illustrate the dynamic processes associated with rapid uplift and consequent rapid erosion of the mountainous terrain east of the San Andreas Fault; and large (hill-sized) blocks in *mélange* entrained in the unnamed fault east of San Benito River illustrate the immense tectonic forces associated with subduction accretion and continent growth along the western margin of North America. These resources and others offer opportunities to illustrate compelling geologic stories of plate tectonics in general, and as they relate to the Pinnacles Rock formations at Pinnacles NM. While the Rock Springs Ranch property is not unique in containing the elements of those geologic stories, the importance of the property is based on its spatial density of different geologic elements (different rock types and geologic structures, different geologic ages), its proximity to Pinnacles NM, and its status as a large single property that includes that wide suite of geologic elements. The additional elements contribute to interpretation of the geologic resources, but do not themselves appear to

constitute outstanding examples of these resources. On the whole, the geologic resources would be a valuable addition to the existing Pinnacles NM because of the contrasting/complementing geology and the presence of several “prime examples.”

ARCHEOLOGY

Rock Springs Ranch lies within the ancestral homeland of at least one band of the Ohlone people (the Chapana, whose descendants would be associated with the Amah Mutsun Tribal Band). Although there are few obvious visible indications of this rich past (at least to the non-specialist), much could still be recovered and learned about pre-contact Ohlonean life and culture through ethnographic research and archeological investigations. Of at least equal importance is the potential for historic archeology and historical research to reveal evidence of post-Mission period resettlement of the region by Native Californians returning to their ancestral homelands after ca1834. Future research could provide significant information pertaining to the survival and ongoing cultural adaptation of Native peoples up to the present day. The Rock Springs Ranch property represents an important opportunity in both these respects and would provide an excellent place in

which to preserve and share this cultural legacy with living Ohlone descendents and the general public.

The potential for the discovery of archeological resources associated with the Ohlonean culture is very high at Rock Springs Ranch. Much of the landscape would have been attractive to Native American use and occupation during the pre-contact period, especially around areas like Rock Springs itself, where many valuable resources—water, acorns and seeds, and game animals, for example—were concentrated. Because of the relative absence of potentially destructive activities during the historic period, these resources likely retain a high level of integrity. Supporting these assumptions, the team found two milling sites during its reconnaissance, even though it was not systematically looking for this sort of resource. One site, located on Rock Springs Creek, seems to indicate extensive use of the area and that the property as a whole was likely used by the Chapana.

Anecdotal accounts from the early 1950s also describe an Indian burial along the banks of Rock Springs Creek. These observations imply a high potential for more discoveries if a systematic approach is taken. The possibility that significant knowledge about pre-contact Ohlonean society could be obtained from this landscape is substantial. Such knowledge and resources could provide value in illustrating cultural themes related to people and places, as well as opportunities for public enjoyment and scientific study.

OTHER IMPORTANT NATURAL AND CULTURAL RESOURCES

WILDLIFE

Rock Springs Ranch contains a rich diversity of relatively intact wildlife habitat that supports Threatened, Endangered, and other sensitive wildlife species. The ranch provides excellent habitat for the federally Endangered California condor through a combination of seclusion, topography, and food sources. Other sensitive species include Cooper's hawk (*Accipiter cooperii*, California Species of Special Concern), prairie falcon (*Falco mexicanus*, California Species of Special Concern) and several sensitive bat species. Aquatic habitat supports populations of the federally Threatened California tiger salamander (*Ambystoma californiense*), Western spadefoot toad (*Spea hammondi*, California Species of Special Concern), and potential habitat for California red-legged frog (*Rana draytonii*). The habitats found at Rock Springs Ranch are found throughout the region and do not themselves appear to constitute outstanding examples of these resources.



Bedrock mortar site. Photo by Chuck Striplen.

EURO-AMERICAN HISTORIC RESOURCES

The principal historic value of the land is associated with early agricultural and pastoral activities, which were characteristic of the entire region. Because little development has occurred on Rock Springs Ranch subsequent to this early period, the landscape and some of the original built features retain the ability to convey the stories of their historic period. Although individual surviving features may not, in themselves, appear impressive, as a whole these features convey the meaning of an entire landscape and period of time, expressed in its cultural traditions and practices and its material productions.

The isolation of this region has allowed Rock Springs Ranch to survive with surprisingly little change to its principal landscape characteristics, although buildings and structures associated with the historic ranch core have been replaced by modern additions associated with the present hunting operation. This represents a substantial loss from a cultural resource perspective and precludes National Register status (except possibly for a few isolated structures). However, Rock Springs Ranch still provides an opportunity to preserve and interpret the history and ethnographic traditions associated with early California settlement and rural life.

CONCLUSION

The chaparral communities of Rock Springs Ranch, including blue oak woodland, the geologic resources, including the San Andreas Fault landforms, and the archeological sites associated with the Ohlonean culture are potentially nationally significant. Further research, particularly a systematic survey of the area for sites associated with the Ohlonean culture, is needed to confirm this finding. The site's wildlife habitat and Euro-American cultural resources are all important resources, but do not appear to constitute outstanding examples of these types of resources. A comprehensive survey of regional resources would provide a context for evaluating these resources in a more thorough and definitive fashion.

Based on this preliminary analysis, Rock Springs Ranch appears to include nationally significant resources worthy of inclusion in a national park unit. The resources at Rock Springs Ranch complement and expand the suite of resources at Pinnacles National Monument that would enhance opportunities for public enjoyment and scientific study related to the purpose of Pinnacles National Monument.

Preliminary Evaluation of Suitability

An area is considered a suitable addition to the national park system as a stand-alone unit if it represents a natural or cultural resource type that is not already adequately represented in the national park system, or is not comparably represented and protected for public enjoyment. Adequacy of representation is determined on a case-by-case basis by comparing the proposed area to other national park system areas.

Based on this preliminary analysis, Rock Springs Ranch is potentially suitable for addition to the national park system under the following themes and topics:

NATURAL HISTORY THEME: LAND ECOSYSTEMS

TOPICS: DRY CONIFEROUS FOREST AND DRY WOODLAND, GRASSLAND, AND CHAPARRAL

Rock Springs Ranch includes excellent examples of vegetation communities, including blue oak woodland and savanna and other unique vegetation types such as native perennial grasslands and serpentine chaparral. In California, blue oak woodland occurs on approximately 10,000 square miles of land. There are several areas in the South Coast Ranges of the South Pacific Border Region that contain blue oak woodland and savanna. While there are few stands of blue oaks at the eastern boundary of Pinnacles National Monument, there is little evidence of regeneration.

Fort Hunter Liggett, an active military installation in Monterey County, contains over 45,000 acres of blue oak woodland. Throughout California, however, blue oak woodland and savanna is threatened by the absence of regeneration and increasing development in habitat areas. At Rock Springs Ranch, blue oak woodlands appear to be regenerating and retain a high degree of integrity. Because blue oak woodlands and other Mediterranean chaparral vegetation are threatened elsewhere and integrity of these resources is high on this property, the inclusion of Rock Springs Ranch within Pinnacles National Monument could enhance and expand protection of these potentially significant resources.

NATURAL HISTORY THEME: LANDFORMS OF THE PRESENT

TOPICS: SCULPTURE OF THE LAND

NATURAL HISTORY THEME: GEOLOGIC HISTORY

TOPICS: TRIASSIC – CRETACEOUS PERIODS, PALEOCENE – EOCENE EPOCHS, AND OLIGOCENE – RECENT EPOCHS

The Rock Springs Ranch property includes San Andreas Fault landforms and associated rocks in and around Little Rabbit Valley, as well as a diversity of geologic elements (different rock types and geologic structures, different geologic ages), including elements of Coast Range geologic units.

The expression of the San Andreas Fault at Rock Springs Ranch is superior to that at Point Reyes.

The geologic resources on the west side of the San Andreas Fault (and at Rock Springs Ranch in general) are not found at Pinnacles NM. Several of the resource type at Rock Springs Ranch (Franciscan rocks, serpentine, San Andreas Fault Zone) are also present in Golden Gate NRA and Point Reyes NS. Other resource types (Great Valley Sequence and overlying Paleogene rocks, Coast Range Fault, Paicines Fault) are not present in any NPS unit.

Inclusion of these resources in Pinnacles National Monument would enhance opportunities to study and interpret the San Andreas Fault and plate tectonics.

CULTURAL RESOURCES THEME: PEOPLEING PLACES

TOPICS: ETHNIC HOMELANDS AND ENCOUNTERS, CONFLICTS, AND COLONIZATION

Rock Springs Ranch represents a portion of the ancestral homeland of at least one band of the Ohlone people – the Chapana. Although no extensive surveys of the property have been completed for archeological resources, the potential for discovery of Native American archeological resources appears to be high because of the limited historic-period development at Rock Springs Ranch. The Chapana occupied the upper San Benito River watershed for at least 4000 years before the Spanish arrived in the late 1700s. Pinnacles National Monument also includes important cultural resources that represent closely-related Ohlonean peoples. The inclusion of Rock Springs Ranch within Pinnacles National Monument could enhance and expand protection of these potentially significant resources.

CONCLUSION

Based on this preliminary suitability analysis, Rock Springs Ranch appears to be a suitable addition to the national park system. Rock Springs Ranch would expand and enhance protection of blue oak woodland and other uncommon vegetation types, some of which are not represented at Pinnacles. The geologic resources at Rock Springs Ranch include types that are not found at Pinnacles, and addition of these resources would enhance opportunities to study and interpret the San Andreas Fault and plate tectonics. There is also the potential to protect and increase knowledge of cultural resources related to Native peoples from pre-contact times up through the historic period. Further study of other lands in the vicinity of Pinnacles and Rock Springs Ranch would be beneficial to determine the extent and quality of other resources of this type in the area.

Preliminary Evaluation of Feasibility

This section provides a preliminary evaluation of the feasibility of adding the Rock Springs Ranch property to the National Park System. This analysis incorporates the two sets of feasibility criteria for inclusion of new areas in the National Park System and for boundary adjustments. In evaluating feasibility, the NPS considers a range of factors, including size and boundary configurations; landownership patterns; local planning and zoning; current and potential uses of the study area and surrounding lands; access and public enjoyment potential; current and potential threats to the resources; existing degradation of resources; the level of local and general public support (including landowners); costs associated with acquisition, development, restoration, and operation; staffing requirements; and, the economic/socioeconomic impacts of designation as a unit of the national park system.

Access and Facilities. The Rock Springs Ranch property is not contiguous with Pinnacles National Monument. It is located approximately 4 miles from Pinnacles' eastern entrance at Highway 25. There is an extensive network of ranch roads within the property (40+ miles), but most of the roads are unpaved and would need work to address accessibility and safety issues as well as resource impacts. The initial costs associated with maintaining, improving, decommissioning roads, and converting some roads to trails would be high. There are relatively new facilities on the property (lodge and guest rooms, residences, barns, shops, corrals, storage buildings) that are well constructed and could be appropriate for administrative use or visitor services. Overall, the facilities at Rock Springs Ranch appear to be in fair to good condition. The water infrastructure (wells, pumps, tanks, pipes)

is aging and may need to be replaced. Initial costs of addressing deficiencies of facilities and replacing infrastructure would be high.

Resource Threats. Overall, the quality and condition of the natural resources appear to be good; however, the ranch has infestations of yellow starthistle (*Centaurea solstitialis*) and/or tocalote (*Centaurea melitensis*) on a portion of the property. Infestation of yellow starthistle is typical in the region. On the western portion of the ranch land, heavy infestations occur on nearly all grassland areas between Old Hernandez Road and Hwy 25, on the floodplains adjacent to San Benito River, and for approximately 2 miles east of the river. The eastern portion of the ranch land at higher elevations has only sparse or no yellow starthistle or tocalote. Some sparse stands of tamarisk (*Tamarix* sp.) occur on the banks of the San Benito River. Management of these invasive plant species would require prioritization of treatment areas with substantial time and resource investment. There is also evidence of exotic wild pig damage to resources, in particular the springs and watercourses. Wild pigs would need to be removed and pig fencing should be installed similar to that at Pinnacles NM. The costs of controlling the invasive species on the property would be very high, and would continue for many years.

Many historic structures and related features remaining on the property have either been altered or replaced by modern additions. There may be a few historic resources that could be restored or rehabilitated. The costs associated with restoration and rehabilitation would be high.

Land Use and Surrounding Landownership.

The property is owned by one landowner. Overall the current management of the property is generally compatible with resource protection goals. Current uses of the property include grazing and (private) hunting, and there is local public support for the continuation of these uses. Under NPS ownership, continued grazing may be used to help manage for healthy grasslands and reduce invasive plant infestations. If cattle grazing were to continue, additional funding would be needed to manage the grazing program. Surrounding properties are privately owned. Increased public access to Rock Springs Ranch may be a concern for surrounding property owners. Old Hernandez Road crosses through several ranches. Future planning for entrance roads and public use opportunities would need to take this concern into consideration.

Public Enjoyment Potential. The potential for public enjoyment at Rock Springs Ranch is high. Public use opportunities could include hiking, biking, horseback riding, camping, picnicking, education, natural and

cultural resource appreciation, and experiencing wilderness character (solitude, dark skies, natural quiet, etc). Some of these potential uses would require improved access and facilities to meet operational and visitor needs. Costs could be moderate to high depending on the levels of visitor use and opportunities provided.

Local Support. The current landowner supports NPS acquisition of the property and addition to Pinnacles National Monument. The owner formally notified Senators Feinstein and Boxer, Congressional Representative Farr, California Governor Schwarzenegger, and NPS Director Jon Jarvis of his support for HB 3444 to designate Pinnacles National Monument as a national park. Aside from the support of the local tribal group (Amah Mutsun Tribal Band), the level of support in the surrounding community is unknown. The NPS did not seek public input during the course of this preliminary assessment of Rock Springs Ranch. The NPS will seek public input regarding inclusion of the property within the park boundary as part of public review of the draft General Management Plan for Pinnacles National Monument.

Costs. Costs to acquire and manage Rock Springs Ranch would be very high, including costs for land acquisition, resource protection, and staffing and visitor services for this large property that is geographically separated from Pinnacles. Acquisition of the property would be a substantial purchase for the National Park Service. The landowner's current asking price for the ranch is approximately \$24,000,000. Land acquisition by the National Park Service is not necessary for inclusion within a national park boundary. The land could be acquired by another entity with NPS as a ready collaborator.

Because Rock Springs Ranch is a large property that is not contiguous with Pinnacles National Monument, there would be substantial staffing needs to operate Rock Springs Ranch as an addition to Pinnacles NM. Pinnacles cannot manage this property without a considerable increase in funding, or a substantial negative impact on existing park resources and services. The costs for operation of some portion of the ranch as a unit of the national park system would depend on the nature of the park unit and the type of role for the National Park Service.

CONCLUSION

Based on available information and the current management capacities at Pinnacles National Monument and the NPS as a whole, adding Rock Springs Ranch to Pinnacles National Monument, from a feasibility standpoint, would be a difficult endeavor. Because of the size of the property and the separation from the current Pinnacles National Monument lands,

acquisition, management and operation would be challenging and costly despite the significant resources.

- The costs of acquiring the property could be very high, limiting the potential for NPS acquisitions at this and other parks for many years.
- Considerable funding would be needed to bring the facilities, particularly the extensive network of ranch roads and potential trails, to the standards required for general public recreational use. Funds used for this purpose would likely diminish the funds available for similar projects at Pinnacles NM.
- Similarly, the costs of providing adequate staffing for public use, addressing resource impacts such as invasive species, and achieving protection goals would be considerable, and would require a substantial increase in the park's base budget as well as funding for individual projects.

Several other factors that would affect feasibility require further analysis, including evaluation of safety issues, historic preservation costs, and the level of public support.

Based on this preliminary analysis, the NPS finds that management of Rock Springs Ranch as either an addition to Pinnacles National Monument or as a stand-alone unit of the national park system is not likely to be feasible in the near future despite the significant resources evident at the site, and that other options for the protection of this important property should be pursued. Partnerships between the NPS and a conservation-oriented landowner and/or other public agencies may be feasible and could be explored.

Need for National Park Service Management

If an area is found to be nationally significant, suitable and feasible for NPS management, the NPS will still recommend management by an organization other than the NPS unless NPS management is found to be necessary or superior to alternate management strategies.

As described earlier, the NPS concludes from this preliminary analysis of Rock Springs Ranch that NPS management is not likely to be feasible, and other management options should be pursued.

Given the significance of the natural and cultural resources at Rock Springs Ranch, its complementary relationship to resources, stories, and values at Pinnacles NM, the value of preserving open space around the monument, and its potential for enhancing public enjoyment of Pinnacles NM and the region,

the NPS values Rock Springs Ranch as a neighbor and partner. It is suggested that protection of resources and enhancement of public enjoyment opportunities should be considered through these, or other, alternative means:

NPS Partnership/Collaboration – Pinnacles National Monument could partner with the land manager under any of the options below. The NPS could provide limited staffing for resource protection, and interpretation and education programs through existing grants and technical assistance programs. Pinnacles NM would need additional staff and funding depending on the nature of the partnership and level of collaboration.

BLM Management – If determined appropriate, the Bureau of Land Management (BLM) could acquire and manage the property. The BLM already manages thousands of acres in the county with hunting, grazing and recreational uses. The BLM is an appropriate agency with professional staffing to manage continued hunting and grazing uses, as well as public recreation.

Conservation Easements – Federal agencies positioned in the county such as the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, BLM and NPS could work with groups such as the California Rangeland Conservation Coalition, the California Rangeland Trust and interested landowners to facilitate conservation of priority habitats in the region. Easements for the conservation of agricultural lands between and surrounding Pinnacles and Rock Springs Ranch could help keep development in abeyance, and provide for a sizable conservation area while continuing traditional ranch uses and private ownership in the area. Protection of condor habitat could include maintenance of a grazing program on the land and a designated recreational hunting zone (already requiring use of non-lead ammunition by law) that could serve as a food resource generator for scavenging condors, as well as population sink for wild pigs.

Other Partners – Other key partners that could potentially provide assistance include: US Fish and Wildlife Service, US Department of Agriculture, and US Geological Survey. Other potential partners could include The Nature Conservancy, National Parks Conservation Assistance Program, the Pinnacles Partnership (the non-profit “friends group” associated with Pinnacles National Monument), and the Amah Mutsun Tribal Band (AMTB). The AMTB has expressed strong interest in partnering with NPS to develop programs to restore, enhance, preserve, and interpret physical and biological resources with cultural significance.

Development and analysis of these options or any others is beyond the scope of this report. The Pinnacles National Monument General Management Plan will address options for collaboration.

Conclusion

The NPS evaluated the potential for addition of RSR to Pinnacles National Monument according to the criteria for new park units as well as under the criteria for boundary adjustments. Those criteria include evaluating the significance of the area’s resources, the suitability of the area to be added to the national park system, the feasibility of managing the added lands, and the need for NPS management.

The preliminary findings are the following:

- **Significance:** The chaparral communities of Rock Springs Ranch, including blue oak woodland, geological resources, and the archeological sites associated with the Ohlonean culture, are potentially nationally significant. Further research, particularly a systematic survey of the area for sites associated with the Ohlonean culture, is needed to confirm this finding. The site’s wildlife habitat and Euro-American cultural resources are all important resources, but do not appear to constitute outstanding examples of these types of resources. *Based on this preliminary analysis, Rock Springs Ranch appears to include nationally significant resources worthy of inclusion in a national park unit. The resources at Rock Springs Ranch complement and expand the suite of resources at Pinnacles National Monument and would enhance opportunities for public enjoyment and scientific study related to the purpose of Pinnacles National Monument.*
- **Suitability:** At Rock Springs Ranch, the chaparral communities, geological resources, and archeological sites associated with Ohlonean culture appear to represent themes that are not well represented in the national park system, although more research is needed to determine the overall extent of these types of resources. *Based on this preliminary analysis, Rock Springs Ranch appears to include resources suitable for inclusion in a national park unit, although further research is recommended.*

- Feasibility: The costs to acquire and manage Rock Springs Ranch would be very high, including costs for land acquisition, resource protection and management of invasive species, and staffing and visitor services for this large property that is geographically separated from Pinnacles National Monument. *Based on this preliminary analysis, the addition of Rock Springs Ranch to Pinnacles National Monument is not likely to be feasible in the near future, and other options for the protection of this important property should be pursued. Partnerships between the NPS and a conservation-oriented landowner and/or other public agencies may be feasible and could be explored.*
- Need for NPS management: Rock Springs Ranch, its significant resources, and its public enjoyment potential, appear to be appropriate for management by another public agency such as the Bureau of Land Management, or through conservation easement or partnership arrangements.

The addition of Rock Springs Ranch to the national park system as an addition to Pinnacles National Monument does not appear to be feasible at this time, and management by another entity may be more appropriate. The NPS does not anticipate including this area as a boundary expansion recommendation in the draft General Management Plan for Pinnacles National Monument. However, the NPS recognizes the importance of the significant resources at Rock Springs Ranch, the area's complementary relationship to resources, stories and values at Pinnacles NM, the value of preserving open space and habitat around the monument, and the ranch's potential for enhancing public enjoyment of Pinnacles and the region. The NPS will therefore recommend in the draft GMP that Pinnacles NM find common purposes in collaborating with current and future ranch owners and managers to achieve resource protection, visitor education and interpretation (if appropriate), and other conservation goals in congruence with existing uses such as ranching and hunting.



View of Pinnacles National Monument from Rock Springs Ranch. NPS photo.

Glossary

Accessibility: Occurs when individuals with disabilities are able to reach, use, understand, or appreciate NPS programs, facilities, and services, or to enjoy the same benefits that are available to persons without disabilities. See also, “universal design.”

Acoustic ecology: The study of sound in the relationships between organisms and their environment.

Adaptive management: A system of management practices based on clearly identified outcomes, monitoring to determine if management actions are meeting outcomes, and, if not, facilitating management changes that will best ensure that outcomes are met or to re-evaluate the outcomes. Adaptive management recognizes that knowledge about natural resource systems is sometimes uncertain and is the preferred method of management in these cases.

Archeology: The scientific study, interpretation, and reconstruction of past human cultures from an anthropological perspective based on the investigation of the surviving physical evidence of human activity and the reconstruction of related past environments. Historic archeology uses historic documents as additional sources of information.

Archeological resource: Any material remains or physical evidence of past human life or activities which are of archeological interest, including the record of the effects of human activities on the environment. They are capable of revealing scientific or humanistic information through archeological research.

Area-specific desired condition (also called area-specific action): Based on management zones, area-specific guidance about the desired resource conditions, visitor experience opportunities, and appropriate kinds and levels of management, development, and access (modes of transportation) for particular areas of the monument; also the kinds of changes needed to move from the existing to the desired conditions.

Asset: A physical structure or grouping of structures, land features, or other tangible property which has a specific service or function.

Asset management: A systematic process of maintaining, upgrading, and operating assets cost-effectively by combining engineering principles with sound business practices and economic theory.

Backcountry: Primitive, undeveloped portions of park units, some of which may be managed as “wilderness.”

Best management practices (BMPs): Practices that apply the most current means and technologies available to not only comply with mandatory

environmental regulations, but also maintain a superior level of environmental performance. See also, “sustainable practices/principles.”

Carbon Footprint: A measure of the amount of carbon dioxide produced by a person, organization or state in a given time.

Climate Change: refers to any distinct change in measures of climate lasting for a long period of time. In other words, “climate change” means major changes in temperature, rainfall, snow, or wind patterns lasting for decades or longer. Climate change may result from:

- natural factors, such as changes in the Sun’s energy or slow changes in the Earth’s orbit around the Sun;
- natural processes within the climate system (e.g., changes in ocean circulation);
- human activities that change the atmosphere’s make-up (e.g, burning fossil fuels) and the land surface (e.g., cutting down forests, planting trees, building developments in cities and suburbs, etc.).

CLIP Tool: Software developed jointly by the Environmental Protection Agency and the NPS, was used to calculate the park’s greenhouse gas emissions.

Conserve: To protect from loss or harm; preserve. Historically, the terms conserve, protect, and preserve have come collectively to embody the fundamental purpose of the NPS—preserving, protecting and conserving the national park system.

Consultation (cultural resources): A discussion, conference, or forum in which advice or information is sought or given, or information or ideas are exchanged. Consultation generally takes place on an informal basis; formal consultation requirements for compliance with section 106 of the NHPA are published in 36 CFR Part 800. Consultation with recognized tribes is done on a government-to-government basis.

Cultural Landscape: A geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or esthetic values. There are four non-mutually-exclusive types of cultural landscapes: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

Cultural Resource: An aspect of a cultural system that is valued by or significantly representative of a culture or that contains significant information about a culture. A cultural resource may be a tangible entity or a cultural practice. Tangible cultural resources are categorized as districts, sites, buildings, structures, and objects for the National Register of Historic Places; and as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources for NPS management purposes.

Cumulative actions: Actions that, when viewed with other actions in the past, the present, or the reasonably foreseeable future regardless of who has undertaken or will undertake them, have an additive impact on the resource the proposal would affect.

Desired condition (also called management direction and management actions): A park's natural and cultural resource conditions that the National Park Service aspires to achieve and maintain over time, and the conditions necessary for visitors to understand, enjoy, and appreciate those resources.

Developed area: An area managed to provide and maintain facilities (e.g., roads, campgrounds, housing) serving visitors and park management functions. Includes areas where park development or intensive use may have substantially altered the natural environment or the setting for culturally significant resources.

Ecosystem: A system formed by the interaction of a community of organisms with their physical and biological environment, considered as a unit.

Ecosystem management: A collaborative approach to natural and cultural resource management that integrates scientific knowledge of ecological relationships with resource stewardship practices for the goal of sustainable ecological, cultural, and socioeconomic systems.

Enabling legislation: The law(s) that establish a park as a unit within the national park system.

Environmental assessment (EA): A brief NEPA document that is prepared, with public involvement, (a) to help determine whether the impact of a proposed action or its alternatives could be significant; (b) to aid the NPS in compliance with NEPA by evaluating a proposal that will have no significant impacts, but may have measurable adverse impacts; or (c) as an evaluation of a proposal that is either not described on the list of categorically excluded actions, or is on the list, but exceptional circumstances apply.

Environmentally preferred alternative (or environmentally preferable alternative): Of the action alternatives analyzed, the one that would best promote the policies in NEPA section 101. This is usually selected by the planning team members. CEQ encourages agencies to identify an environmentally preferable alternative in the draft EIS or EA.

Ethnographic resource: A site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it.

Existing infrastructure: The systems, services, and facilities currently in a park unit, including buildings, roads, trails, power equipment, water supply, etc.

Finding of No Significant Impact (FONSI): A determination based on an EA and other factors in the public planning record for a proposal that, if implemented, would have no significant impact on the human environment.

Foundation document: A statement that begins a park unit's planning process and sets the stage for all future planning and decision-making by identifying the park's mission, purpose, significance, special mandates and the broad, park-wide mission goals. Incorporated into a park unit's GMP, but may also be produced as a stand-alone document for a park unit.

Fundamental resources and values: Those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management because they are critical to achieving the park unit's purpose and maintaining its significance. A fundamental value, unlike a tangible resource, refers to a process, force, story or experience, such as such as an island experience, the ancestral homeland, wilderness values, or oral histories.

Fossil: Any evidence of past life found in a geological context.

Fossiliferous: Containing fossils.

Gateway community: A community that exists in close proximity to a unit of the national park system whose residents and elected officials are often affected by the decisions made in the course of managing the park unit, and whose decisions may affect the resources of the park. Because of this, there are shared interests and concerns regarding decisions. Gateway communities usually offer food, lodging, and other services to park visitors. They also provide opportunities for employee housing, and a convenient location to purchase goods and services essential to park administration.

General management plan (GMP): A plan which clearly defines direction for resource preservation and visitor use in a park, and serves as the basic foundation for decision making. GMPs are developed with broad public involvement.

Geologic period: The period is a basic unit of geological time. Two or more periods comprise a geological era. Most periods are divided into smaller units called epochs.

Geologic resources: Features produced from the physical history of the earth, or processes such as exfoliation, erosion and sedimentation, glaciation, karst or shoreline processes, seismic, and volcanic activities.

Historic district: A geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, landscapes, structures, or objects, united by past events or aesthetically by plan or physical developments.

Human environment: Defined by CEQ as the natural and physical environment, and the relationship of people with that environment. Although the socioeconomic environment receives less emphasis than the physical or natural environment in the CEQ regulations, NPS considers it to be an integral part of the human environment.

Impact: The likely effect of an action or proposed action upon specific natural, cultural or socioeconomic resources. Impacts may be direct, indirect, individual, cumulative, beneficial, or adverse. (Also see Unacceptable impacts.)

Impact topics: Specific natural, cultural, or socioeconomic resources that would be affected by the proposed action or alternatives (including no action). The magnitude, duration, and timing of the effect to each of these resources is evaluated in the impact section of an EA or an EIS.

Impairment: An impact that, in the professional judgment of a responsible NPS manager, would harm the integrity of park resources or values and violate the 1916 NPS Organic Act's mandate that park resources and values remain unimpaired.

Implementation plan: A plan that focuses on how to implement an activity or project needed to achieve a long-term goal. An implementation plan may direct a specific project or an ongoing activity.

Indicators of user capacity: Specific, measurable physical, ecological, or social variables that can be measured to track changes in conditions caused by public use, so that progress toward attaining the desired conditions can be assessed

Issue: Some point of debate that needs to be decided.

Life cycle costing (analysis): An accounting method that analyzes the total costs of a product or service, including construction, maintenance, manufacturing, marketing, distribution, useful life, salvage, and disposal.

Light Pollution: The illumination of the night sky caused by artificial light sources, decreasing the visibility of stars, and other natural sky phenomena. Also includes other incidental or obtrusive aspects of

outdoor lighting such as glare, trespass into areas not needing lighting, alternation of nighttime landscape, and negative impact to ecosystems.

Lithology: The study of rocks; the character of a rock formation.

Management concept: A brief, statement of the kind of place the park should be (a "vision" statement)

Management zone: A geographical area for which management directions have been developed to determine what can and cannot occur in terms of resource management, visitor use, access, facilities or development, and park operations. Each zone has a unique combination of resource and social conditions and a consistent management direction. Different actions are taken by the NPS in different zones.

Management zoning: The application of management zones to a park unit. The application of different type of zones and/or size of zones will likely vary in different alternatives.

Management direction (also called desired condition and management prescription): A planning term referring to statements about desired resource conditions and visitor experiences, along with appropriate kinds and levels of management, use, and development for each park area.

Manager: The managerial-level employee who has authority to make decisions or to otherwise take an action that would affect park resources or values. Most often it refers to the park superintendent or regional director, but may at times include, for example, a resource manager, facility manager, or chief ranger to whom authority has been re-delegated.

Mitigation: A modification of a proposal to lessen the intensity of its impact on a particular resource. Actions can be taken to avoid, reduce, or compensate for the effects of environmental damage.

Museum Collection: Assemblage of objects, works of art, historic documents, or natural history specimens collected according to a rational scheme and maintained so they can be preserved, studied, and interpreted for public benefit. Museum collections normally are kept in park museums, although they may also be maintained in archeological and historic preservation centers (NPS DO-28).

Museum object: A material thing possessing functional, aesthetic, cultural, symbolic, and/or scientific value, usually movable by nature or design. Museum objects include prehistoric and historic objects, artifacts, works of art, archival material, and natural history specimens that are part of a museum collection. Structural components may be designated museum objects when removed from their associated structures.

National Park Service Organic Act: The 1916 law (and subsequent amendments) that created the National Park Service and assigned it responsibility to manage the national parks.

National park system: The sum total of the land and water now or hereafter administered by the Secretary of the Interior through the National Park Service for park, monument, historic, parkway, recreational or other purposes.

National Register of Historic Places: The comprehensive federal listing of nationally, regionally, or locally significant districts, sites, buildings, structures, and objects of national, regional, state, and local significance in American history, architecture, archeology, engineering, and culture kept by the National Park Service in authority of the National Historic Preservation Act of 1966.

Native American: Pertaining to American Indian tribes or groups, Eskimos and Aleuts, and Native Hawaiians, Samoans, Chamorros, and Carolinians of the Pacific Islands. Groups recognized by the federal and state governments and named groups with long-term social and political identities who are defined by themselves and others as Indian are included.

NEPA process: The objective analysis of a proposed action to determine the degree of its impact on the natural, physical, and human environment; alternatives and mitigation that reduce that impact; and the full and candid presentation of the analysis to, and involvement of, the interested and affected public—as required of federal agencies by the National Environmental Policy Act of 1969.

Other important resources and values: Those attributes that are determined to be particularly important to park management and planning, although they are not related to the park's purpose and significance

Paleontological / paleoecological resources: Resources such as fossilized plants, animals, or their traces, including both organic and mineralized remains in body or trace form. Paleontological resources are studied and managed in their paleoecological context (that is, the geologic data associated with the fossil that provides information about the ancient environment).

Pastoralism refers to the economy of raising livestock (as opposed to agriculture or agrarianism, which refer to raising plants, as in farming.)

Planning, Environment, and Public Comment (PEPC) System: An online database designed to facilitate the project management process in conservation planning and environmental impact analysis. It assists NPS employees in making informed decisions with regard to a number of compliance issues throughout the planning, design, and construction process.

Potential boundary modifications: The description of areas or resources that meet criteria for boundary adjustments, along with the rationale for an adjustment,

Potential management zone: General guidance about an integrated set of resource conditions and associated visitor experiences that could be applied to various locations throughout a park,

Preferred alternative: The alternative an NPS decision-maker has identified as preferred at the draft EIS stage. It is identified to show the public which alternative is likely to be selected to help focus its comments.

Preserve: To protect from loss or harm; conserve. Historically, the terms preserve, protect and conserve have come collectively to embody the fundamental purpose of the NPS—preserving, protecting and conserving the national park system.

Preservation (cultural resources): The act or process of applying measures to sustain the existing form, integrity, and material of a historic structure, landscape or object. Work may include preliminary measures to protect and stabilize the property, but generally focuses upon the ongoing preservation maintenance and repair of historic materials and features rather than extensive replacement and new work.

Primary interpretive themes: The most important ideas or concepts to be communicated to the public about a park

Professional judgment: A decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account

- the decision-maker's education, training, and experience
- advice or insights offered by subject matter experts and others who have relevant knowledge and experience
- good science and scholarship; and, whenever appropriate,
- the results of civic engagement and public involvement activities relating to the decision.

Public involvement (also called public participation): The active involvement of the public in NPS planning and decision-making processes. Public involvement occurs on a continuum that ranges from providing information and building awareness, to partnering in decision making.

Projected implementation costs: A projection of the probable range of recurring annual costs, initial one-time costs, and life-cycle costs of plan implementation.

Purpose: The specific reason(s) for establishing a particular park unit.

Reduction is from the Spanish *reduccion*, which was the technical term describing how the Indians were gathered from multiple locations and forced to live in a single community within or around a mission. It is essentially synonymous with “missionize”, though it does not carry the additional meanings of conversion and acculturation, which were also part of the mission project.

Rehabilitation: In reference to cultural resources, the act or process of making possible an efficient compatible use for a historic structure or landscape through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, and architectural values (NPS DO-28).

Research Natural Area (RNA): Research Natural Areas are part of a national network of sites administratively designed to facilitate research and preserve natural features. RNAs are usually established in a typical example of an ecological community type, preferably one having been little disturbed in the past and where natural processes are not unduly impeded. The tract is set aside permanently and is managed exclusively for approved non-manipulative research; i.e., research that measures but does not alter existing conditions. Activities in RNAs are restricted to non-manipulative research, education, and other activities that will not detract from an area’s research values. An RNA in a park is designated by the National Park Service.

Restoration: From a cultural resource perspective, (1) The act or process of accurately depicting the form, features, and character of a historic structure, landscape, or object as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period; (2) The resulting structure, landscape, or object.

From a natural resource perspective, restoration refers to the reestablishment/recovery of biological community structure, natural functions and processes in landscapes that have been disturbed or altered by people — actions taken to return disturbed areas to the natural conditions and processes characteristic of the ecological zone in which the damaged resources are situated.

Landscapes that have been disturbed by natural phenomena, such as floods and hurricanes, generally are allowed to recover naturally in parks unless manipulation is necessary to protect other park resources, developments, or employee and public safety.

Sacred Sites: Certain natural and cultural resources treated by American Indian tribes and Alaska Natives, and Native Hawaiians as sacred places having established religious meaning, and as locales of private ceremonial activities.

Scoping: Includes internal NPS decision-making on issues, alternatives, mitigation measures, the analysis boundary, appropriate level of documentation, lead and cooperating agency roles, available references and guidance, defining purpose and need, and so forth; and external scoping, the early involvement of the interested and affected public.

Section 106: Refers to Section 106 of the National Historic Preservation Act of 1966, which requires federal agencies to take into account the effects of their proposed undertakings on properties included or eligible for inclusion in the National Register of Historic Places and give the Advisory Council on Historic Preservation a reasonable opportunity to comment on the proposed undertakings.

Significance: Statements of why, within a national, regional, and systemwide context, the park’s resources and values are important enough to warrant national park designation.

Social Trail: A trail that is created by humans and is not part of the monument’s official designated trail system; also called unofficial and visitor-created trails.

Soil Association: A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Soil Map Units: A unit of description used in soil surveys. It is a locality of soil containing specific characteristics. Soil associations can contain many different soil map units.

Soundscape (natural): The aggregate of all the natural, nonhuman-caused sounds that occur in parks, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive, and can be transmitted through air, water, or solid materials.

State Historic Preservation Officer (SHPO): An official in each state appointed by the governor to administer the state historic preservation program and carry out certain responsibilities relating to federal undertakings in the state (NPS DO-28).

Structure: Structures are constructed works, usually immovable by nature or design, consciously created to serve some human activity. Examples are buildings of various kinds, monuments, dams, roads, railroad tracks, canals, millraces, bridges, tunnels, locomotives, nautical vessels, stockades, forts and associated earthworks, Indian mounds, ruins, fences, and outdoor sculpture. In the national register program “structure” is limited to functional constructions other than buildings (NPS DO-28).

Special mandates: Legal mandates specific to a park unit that expand upon or contradict a park unit's legislated purpose.

Stakeholders: Individuals and organizations that are actively involved in the project, or whose interests may be positively or negatively affected as a result of the project execution /completion. They may also exert influence over the project and its results. For GMP planning purposes, the term stakeholder includes NPS offices/staff as well as public and private sector partners and the public, which may have varying levels of involvement.

Standards: The minimum acceptable condition for an indicator of a desired condition

Stewardship: The cultural and natural resource protection ethic of employing the most effective concepts, techniques, equipment, and technology to prevent, avoid, or mitigate unacceptable impacts.

Strategic plan: A Service-wide, 5-year plan required by GPRA (5 USC 306) in which the NPS states (1) how it plans to accomplish its mission during that time, and (2) the value it expects to produce for the tax dollars expended. Strategic plans serve as "performance agreements" with the American people.

Superintendent: The senior onsite NPS official in a park.

Sustainable design: Design that applies the principles of ecology, economics, and ethics to the business of creating necessary and appropriate places for people to visit, live in, and work. Development that has a sustainable design sits lightly upon the land, demonstrates resource efficiency, and promotes ecological restoration and integrity, thus improving the environment, the economy, and society.

Sustainable practices/principles: Those choices, decisions, actions and ethics that will best achieve ecological/ biological integrity; protect qualities and functions of air, water, soil, and other aspects of the natural environment; and preserve human cultures. Sustainable practices allow for use and enjoyment by the current generation, while ensuring that future generations will have the same opportunities.

Traditionally associated peoples: Social cultural entities such as tribes, communities, and kinship units exhibiting a continued identity and associated with a specific park unit, area, or resource.

User Capacity: The type and level of use that can be accommodated while sustaining the quality of park resources and visitor opportunities consistent with the purposes of the park unit. It is not necessarily a set of numbers or limits, but rather a process involving

establishing desired conditions, monitoring, evaluation, and actions (managing visitor use) to ensure values are protected.

Unacceptable impacts: Impacts that, individually or cumulatively, would

- be inconsistent with a park's purposes or values, or
- impede the attainment of a park's desired future conditions for natural and cultural resources as identified through the park's planning process, or
- create an unsafe or unhealthful environment for visitors or employees, or
- diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or
- unreasonably interfere with park programs or activities, or an appropriate use, or
 - the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park, or
 - NPS concessioner or contractor operations or services.

Universal design: The design of products and environments to be usable by all people to the greatest extent possible, without the need for adaptation or specialized design.

Value analysis/value engineering: An organized, multi-disciplined team effort that analyzes the functions of facilities, processes, systems, equipment, services, and supplies for the purpose of achieving essential functions at the lowest lifecycle cost consistent with required performance, reliability, quality, and safety.

Visitor: Anyone who physically visits a park for recreational, educational or scientific purposes, or who otherwise uses a park's interpretive and educational services, regardless of where such use occurs (e.g., via Internet access, library, etc.).

Visitor experience: The perceptions, feelings, and reactions a person has while visiting a park. Examples of visitor experiences include: a sense of being immersed in a natural landscape; a feeling of being crowded; a feeling of being in an area where the sights and sounds of people and vehicles are predominant; having a sense of challenge and adventure; or a perception of solitude and privacy.

Wilderness (designated): Federal land that has been designated by Congress as a component of the national wilderness preservation system.

Zone: See "management zone."

Acronyms and Abbreviations

ABP	Asset Business Plan	NRHP	National Register of Historic Places
ABA	Architectural Barriers Act of 1968	PAMP	Park Asset Management Plan
ADA	Americans with Disabilities Act of 1970	PEPC	Planning, Environment, and Public Comment
APCD	Air Pollution Control District	PL	Public Law
API	Asset Priority Index	PM	particulate matter
BLM	Bureau of Land Management	PWA	Public Works Administration
BOR	Bureau of Reclamation	RMCO-NRDC	Rocky Mountain Climate Organization and the Natural Resources Defense Council
CBA	Choosing By Advantages	ROG	reactive organic gases
CCC	Civilian Conservation Corps	RV	Recreational Vehicle
CEQ	Council on Environmental Quality	SO ₂	Sulfur dioxide
CLI	Cultural Landscape Inventory	USFS	United States Forest Service
CLIP	Climate Leadership in Parks	USFWS	United States Fish and Wildlife Service
CFR	Code of Federal Regulations	USGS	United States Geological Survey
C02	Carbon Dioxide		
CRV	Current Replacement Value		
DO	Director's Order		
EA	Environmental Assessment		
EPA	Environmental Protection Agency		
ESA	Endangered Species Act		
FCI	Facility Condition Index		
FCRPA	Federal Cave Resources Protection Act of 1988		
FMH	Fire Effects Handbook		
FMSS	Facility Management Software System		
FTE	Full time equivalent		
FY	Fiscal Year		
GIS	Geographic Information Systems		
GMP	General Management Plan		
I&M	Inventory and Monitoring		
IMPROVE	Interagency Monitoring of Protected Visual Environments		
LCS	List of Classified Structures		
MMP	Museum Management Plan		
NAGPRA	Native American Graves Protection and Repatriation Act		
NEPA	National Environmental Policy Act		
NHL	National Historic Landmark		
NHPA	National Historic Preservation Act		
NOx	nitrogen oxide and nitrogen dioxide		
NPS	National Park Service (also Park Service)		

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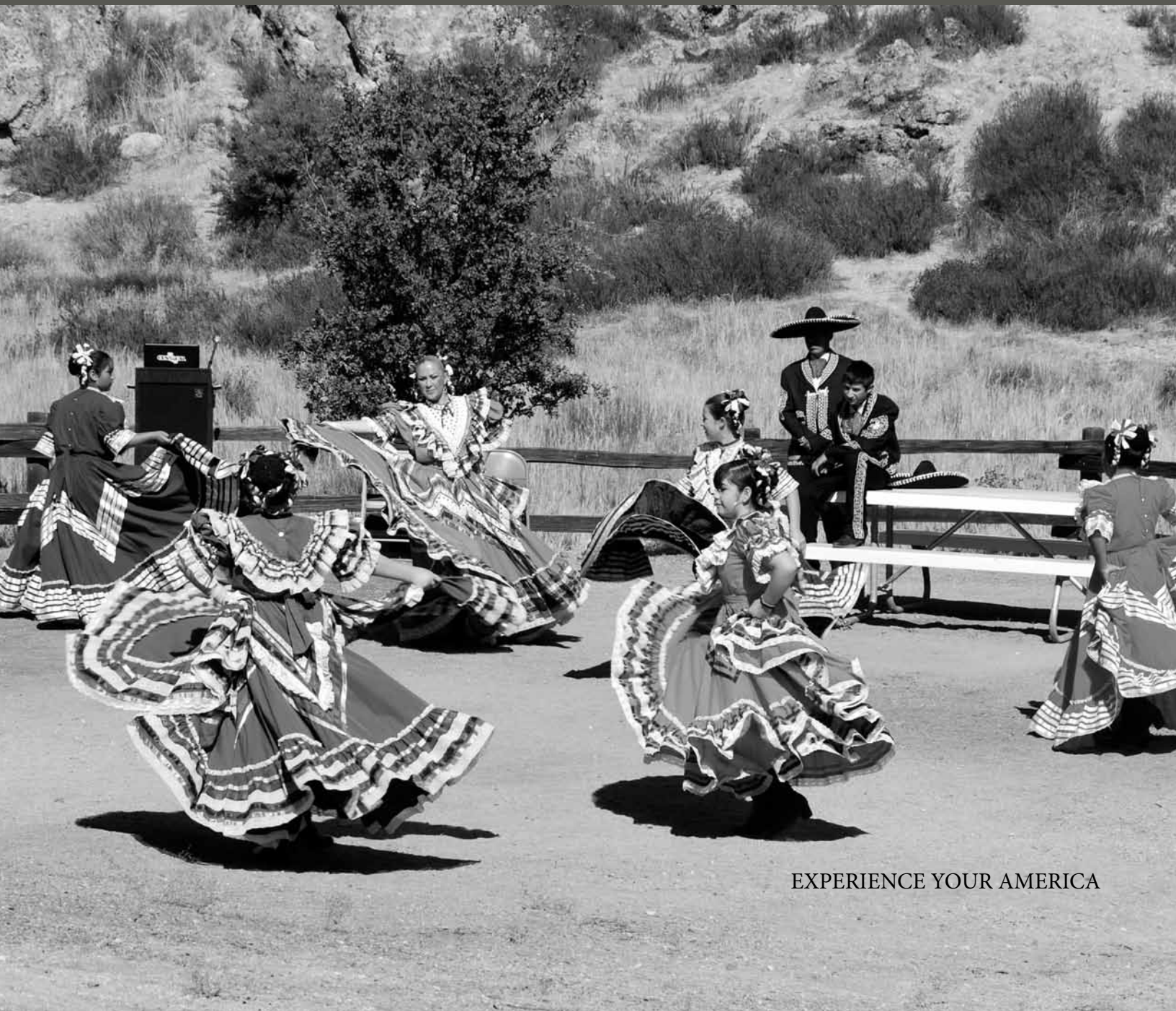
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